

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
NORTHERN DISTRICT

KLAMATH RIVER WATER QUALITY STUDY Hamburg to Orleans



MARCH 1987

Gordon K. Van Vleck
Secretary for Resources
The Resources
Agency

George Deukmejian
Governor
State of
California

David N. Kennedy
Director
Department of
Water Resources


FOREWORD

The Klamath River, originating in south-central Oregon, flows southwest through five Northern California counties and terminates in the Pacific Ocean some 20 miles south of Crescent City. The river carries more than 16 percent of the combined flow of all water-producing areas in California. Now protected under the California Wild and Scenic Rivers Act of 1970, the Klamath provides an excellent habitat for salmon and steelhead fisheries.

The Department of Water Resources has monitored the Klamath River at selected stations for more than 20 years, and its quality has varied widely, although mineral quality is generally good to excellent. In addition, area residents and others have voiced complaints about excessive foaming, discoloration of the water, overabundance of algae, and overall unsightliness of the river--conditions observed in the downstream reach that arise from upstream sources.

This study, which was conducted from May 1984 to January 1986, was undertaken to investigate the water quality of the Klamath River between Hamburg and Orleans, a remote, little-used reach of the river. This report, which describes the geology, climate, level of development, and water supply of the study area, sets forth prevailing hydrologic conditions, summarizes water quality data, and provides findings and conclusions of the investigation.

The information developed in this study is essential in managing the Klamath River to make maximum use of permissible beneficial uses and in planning for conjunctive use of ground water and surface water. The study results should also be useful in helping develop more definite objectives for water quality control plans.


Wayne S. Gentry, Chief
Northern District

State of California
GEORGE DEUKMEJIAN, Governor

The Resources Agency
GORDON K. VAN VLECK, Secretary for Resources

Department of Water Resources
DAVID N. KENNEDY, Director

JOHN P. CAFFREY
Deputy Director

ROBERT G. POTTER
Deputy Director

ROBERT E. WHITING
Deputy Director

SALLE S. JANTZ
Assistant Director

ROBERT W. JAMES
Chief Counsel

NORTHERN DISTRICT
Red Bluff

This report was prepared under the direction of

Wayne S. Gentry District Chief
Philip J. Lorens Chief, Water Management Branch

by

Robert A. Steel Chief, Water Quality and Biology Section
David J. Cahoon Associate Engineer, Water Resources

Assisted by

Robert F. Clawson* Chief, Planning Branch
Gerald L. Boles Environmental Specialist IV
Stacy A. Cepello Environmental Specialist III
Lee R. Gibson Water Resources Engineering Associate
Eric S. Koch Assistant Engineer, Water Resources
David J. Bogener Environmental Specialist II
Stephen M. Turek Environmental Specialist II
Joyce M. Lacey Environmental Specialist II
James P. Langley Water Resources Technician II
Patricia L. Armstrong Water Resources Technician I
Sheryl L. Beach Water Resources Graduate Assistant
Delrae S. Violetti Student Assistant
Clifford D. Maxwell Senior Delineator
Shawn G. Thomas Drafting Aid II
Diane M. McGill Executive Secretary I
June M. Daniels Office Technician

*The study/field investigations were prepared
under the direction of Robert F. Clawson.

TABLE OF CONTENTS

	<u>Page</u>
FOREWORD	iii
ORGANIZATION	iv
SUMMARY	1
Findings	1
Conclusions	2
INTRODUCTION	3
Scope and Methodology of the Study	3
Area of Investigation	4
Geology	4
Climate	4
Development	4
Water Supply	6
Waste Discharge	6
HYDROLOGY	7
Precipitation	7
Runoff	7
River Profile	9
Water Use	12
WATER QUALITY	13
Water Quality Parameters	13
Chemical	13
Physical	14
Sampling and Analytical Methods	15
STUDY RESULTS	17
Chemical Characteristics	17
Chlorides	19
Sulfates	19
Boron	19
pH and Alkalinity	19
Nutrients	20
Dissolved Oxygen	20
Physical Characteristics	22
Temperature	22
Turbidity	23
Suspended Solids	23
CONVERSION FACTORS	inside back cover

FIGURES

		<u>Page</u>
1	Location Map, Klamath River Water Quality Study	5
2	Total Monthly Precipitation, Klamath River Basin, Hamburg to Orleans	8
3	Mean Monthly Flows in the Klamath River	10
4	Middle Klamath River Streambed Profile	11
5	Electrical Conductivity in the Klamath River	18
6	Dissolved Oxygen and Temperature in the Klamath River	21
	Diurnal Variations of Temperature and Dissolved Oxygen (Each figure consists of three separate diurnal periods):	
7	Klamath River at Sarah Totten Campground	24
8	Klamath River near Seiad Valley	27
9	Klamath River above Happy Camp	30
10	Klamath River above Oak Flat Creek	33
11	Klamath River above Independence Creek	36
12	Klamath River above Dillon Creek	39
13	Klamath River above Ti Creek	42
14	Klamath River above Salmon River	45
15	Klamath River at Orleans	48
16	Indian Creek at Mouth at Happy Camp	51
17	Clear Creek near Happy Camp	54
18	Dillon Creek near Somesbar	57
19	Salmon River at Somesbar	60

TABLES

1	Hydrologic Characteristics in the Study Area	9
2	Analytical Methods for Water Quality Parameters	16

PLATES

1	Area of Investigation	63
---	---------------------------------	----

APPENDICES

A	Mineral Analysis of Surface Water	73
B	Nutrient Analysis of Surface Water	231
C	Miscellaneous Constituents in Surface Water	251
D	Minor Element Analysis of Surface Water	261

SUMMARY

Findings

Significant findings of this investigation are:

1. The average annual flow in the Klamath River near Seiad Valley is about 3,000,000 acre-feet, while downstream at Orleans, it is 6,000,000 acre-feet.
2. Approximately 50 percent of the average annual flow in the river at Orleans originates from sources upstream of the study area.
3. The runoff in the Klamath River was near normal during the two-year study period (1984-85).
4. Downstream of Hamburg, the major beneficial uses are instream recreation and fisheries habitat.
5. Electrical conductivity (EC) values rarely exceed 250 micromhos per centimeter ($\mu\text{mhos/cm}$) in the Klamath River and 175 μmhos in the major tributaries.
6. The waters of the Klamath River and its tributaries are strongly bicarbonate in character and generally contain low concentrations of chlorides and sulfates.
7. The boron concentration in the Klamath River is very low, averaging 0.1 milligram per liter (mg/L).
8. The acidity-alkalinity (pH) of the Klamath River usually ranges from a neutral value of 7.0 to 9.0, with the higher alkaline values occurring in the summer during periods of high biological productivity.
9. Nutrient concentrations found in the Klamath River are generally higher than those found in most other Northern California waters.
10. Dissolved oxygen (DO) levels in the Klamath River seldom drop below 8 mg/L; however, the summer levels have often dropped to near 7 mg/L.
11. Diel dissolved oxygen fluctuations of 4 mg/L in the Klamath River, common during the summer months, are indicative of a productive river system.
12. Seasonal and diel temperature changes are prominent in the Klamath River. Temperatures range from winter lows near 1°C to summer highs near 27°C, while diel variations frequently exceed 5°C during the summer.
13. During the summer months, the Klamath River usually looks turbid; however, this condition is probably the result of organic coloring rather than suspended sediment.
14. Periphyton growths in the upper reaches of the Klamath River are carried downstream and cause additional impacts to the river system.

Conclusions

This investigation has resulted in the following conclusions:

1. Because the waters of the Klamath River are extensively developed upstream of Hamburg, and limited additional development is expected in the study reach, future flow patterns will probably change little and will continue to vary with the annual precipitation and water supply.
2. The Klamath River waters are chemically enriched from sources upstream of the study area. These chemicals are contributed by atmospheric sources, natural surface runoff, ground water accretion, wildlife, domestic and agricultural wastes, recycling from lake sediments, and other sources. The quality improves in a downstream direction due to dilution by tributary inflows.
3. Although there is large seasonal variation in the quality of Klamath River waters, its mineral quality is usually good to excellent, as EC values rarely exceed 250 $\mu\text{mhos/cm}$.
4. Nutrient levels in the Klamath River are sufficient to support high to excessive productivity. When impounded in upstream reservoirs, algal blooms will develop and, as these waters are released, nuisance conditions can be expected in the downstream study area of the river.
5. As the inflow of nutrients to the Klamath River is expected to remain high, periphyton will continue to be present at nuisance levels during some seasons at various locations in these systems.
6. Seasonal and diel temperature changes are large, stressing some aquatic organisms.
7. The minimum DO level found to exist in the Klamath River waters is near 7 mg/L, which is adequate to maintain the existing aquatic ecosystem.
8. Any water resource management plan involving the Klamath River system should recognize the natural variability of quality and set realistic objectives that will protect this valuable water resource. Consideration should be given to the large seasonal and diel changes that occur in flow, temperature, and dissolved oxygen.

INTRODUCTION

The Klamath River from Iron Gate Dam to the mouth is some 200 miles long. This study was undertaken to increase our knowledge of this valuable river's water quality so that it can be properly managed and protected. The tremendous size of this river system and limited availability of funds have made it necessary to study the river in several reaches. The first segment, from Iron Gate Dam to Hamburg, is described in the report entitled "Shasta/Klamath Rivers Water Quality Study", dated February 1986. This report covers the second reach, Hamburg to Orleans.

The water quality of the Klamath River near Seiad Valley has been monitored for 28 years, as has the Salmon River at Somesbar. The Klamath River at Orleans has been monitored for 22 years. The resultant data have provided a valuable basis for planning this study and for relating study period results to long-term conditions.

Although the monitoring records indicate that the Klamath River waters are good to excellent in mineral quality, seasonal problems related to water temperature, high levels of biological productivity, and aesthetics are apparent. Historic data do not indicate any significant water quality changes or adverse trends occurring in this reach of the river.

Scope and Methodology of the Study

This investigation began with a review of historic water quality data and previous reports on the Klamath River. The review indicated that water quality problems related to high nutrient content and associated excessive biologic activity were prominent in the Klamath River downstream from Iron Gate Reservoir. This study not only evaluates the Klamath River in this downstream reach, but provides information on some of the larger tributaries to the river.

The field investigation started in May 1984 and continued through January 1986. Seven water quality sampling surveys were conducted during the study. Samples were collected and water quality parameters measured during day and night periods to record diel quality variations during these surveys. The monitoring of water quality was also continued during this investigation at the stations with long-term records.

To provide data that would show nutrient distribution throughout the system and indicate major source areas, concentrations of nitrogen and phosphorus were measured seasonally at a network of sampling stations. In addition to these macronutrients, measurements of the more common chemical and physical parameters were made frequently and selected samples were analyzed for trace metals.

This report includes summaries of both historic data and new data developed during this investigation. Evaluations of the hydrologic conditions and water quality characteristics of the study area rivers are presented. The report contains findings and conclusions, as well as descriptions of the investigation and methods used.

Area of Investigation

The reach of the Klamath River examined in this study extends from Hamburg downstream some 80 miles to Orleans (Figure 1). The river flows west to Happy Camp, then south to Orleans, and is paralleled by State Highway 96. Two major stream systems tributary to the Klamath River in this reach are Indian Creek and Salmon River. The headwaters of Indian Creek are on the southern slopes of Bare Mountain near the Oregon border, and from there the creek flows south to its confluence with the Klamath River at Happy Camp. The Salmon River originates along the slopes of the Marble Mountains and Trinity Alps and flows west to its confluence with the Klamath River near Somesbar.

Geology

The area of investigation lies within the Klamath Mountains geomorphic province, which forms a complex, rugged range whose peaks and ridges reach some 6,000 to 8,000 feet above sea level. The Klamath Mountains were developed by stream erosion of an uplifted plateau and are transected by the Klamath River. This province is in a regional state of early maturity, and the streams lie in deep, narrow-bottomed canyons, with very few developed valleys. The bedrocks range in age from pre-Silurian to Recent and include schist, greenstone, consolidated sedimentary rocks, and intrusive rocks ranging from granodiorite to serpentine.

Climate

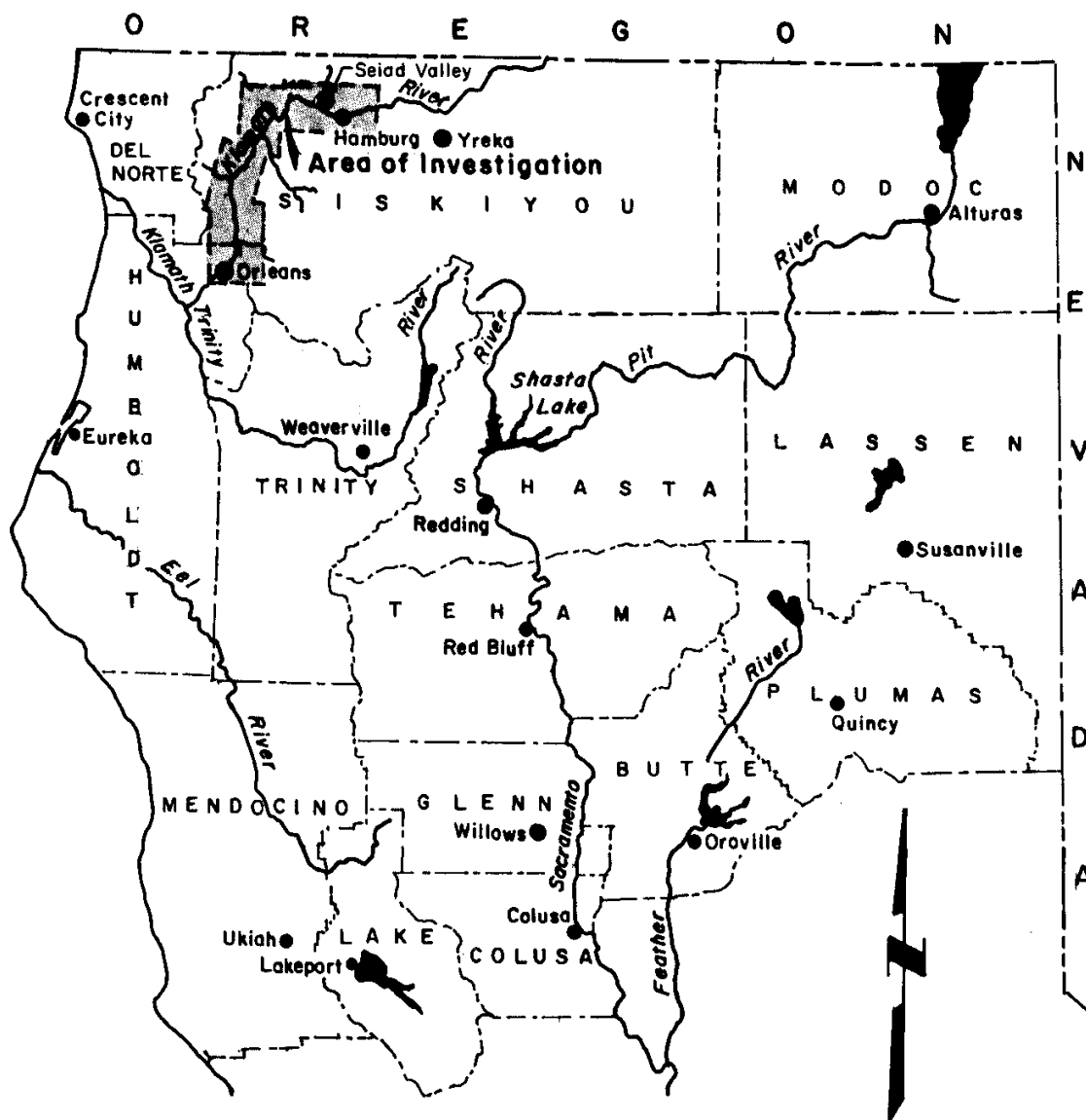
The geographical extent of the Klamath River Basin results in a wide variety of climatic conditions. As moisture-laden air from the Pacific Ocean moves inland, it crosses the coastal mountain ranges of Northern California and Southern Oregon; as it ascends the western faces of the mountains, much of its moisture condenses and falls as rain or snow, leaving lesser amounts as it travels eastward. The mean annual precipitation in the study area is about 64 inches, but it varies from more than 100 inches annually in the west to 50 inches annually at Happy Camp in the east.

The climate in this region is characterized by dry summers with high daytime temperatures and wet winters with moderate to low temperatures. About 85 percent of the annual precipitation falls between October and March. In the Happy Camp area, the annual mean temperature is about 56°F. January is the coldest month, with a mean temperature of 39°F. July is the warmest month, with a mean of about 73°F. Extreme temperatures in the area vary from 115° to 6°F.

Development

Settlement in this region of the Klamath River Basin began in the early 1850s with the discovery of gold in California. As the readily available gold supply dwindled, settlers realized the vast timber stands and the recreation potential were of far greater value. The current economy has grown dependent on these resources.

Figure 1



Location Map
Klamath River Water Quality Study
Hamburg to Orleans

Happy Camp, a remote community with a population of about 2,500, is the only developed community located in this study area. Due to the rugged terrain with narrow canyons and few small valleys, development in this area has been highly restricted. Several smaller settlements are scattered throughout the watershed.

The local economy in the Happy Camp area is mainly dependent on the lumber industry, which played an important role in its development. Timber harvested, predominantly pine, fir, and cedar, is processed locally. Recreational activities have also increased in the area and influenced further development and need for services. Abundant wildlife attracts visitors for hunting and fishing, while opportunities for hiking, whitewater rafting, or enjoying the scenic beauty bring others. Mining activities have also sporadically provided boosts to the economy.

Water Supply

The mean annual flow of the Klamath River near Seiad Valley is about 2,994,000 acre-feet, while downstream at Orleans it is about 6,019,000 acre-feet. The large increase is attributed to the two major tributary drainages of Indian Creek and Salmon River and several minor drainage basins. Most of the streamflow occurs from December through April, while water demands are greatest from May through September.

Water use in this sparsely populated region is limited mainly to minor irrigation diversions. Seiad Creek at Seiad Valley is used extensively and has water rights defined by court decrees. Elk Creek is the main water supply for Happy Camp. Several smaller communities use ground water as their water source.

Waste Discharge

Throughout the Klamath River drainage, major point-source waste discharges have been limited primarily to lumber mill operations, domestic wastes, and landfill operations. Such wastes are typically high in organics and exert oxygen demands in the receiving waters. They are sources of phosphorus, nitrogen, and other nutrients and also contain chlorides, sulfates, and dissolved solids, which can add to the levels found in the receiving waters.

Additional domestic wastes are discharged through cesspools or septic tanks and leach fields in several unsewered communities scattered throughout the watershed. Because populations have remained low, domestic wastes probably have had little impact on the quality of the Klamath River.

The California Water Quality Control Board, North Coast Region, has adopted waste discharge requirements for the waste disposal from the larger domestic, lumber mill, and landfill sources, and impacts from these sources have been minimal.

Nonpoint sources associated with agricultural and timber harvesting activities have probably had a greater impact on the Klamath River than point sources. These activities often increase the suspended sediment loads in the nearby surface waters, and materials washed into the streams can increase nutrient levels and discolor the receiving waters.

HYDROLOGY

Hydrologic conditions in this study area of the Klamath River Basin are affected mainly by the areal and seasonal distribution of precipitation and the influence of snowmelt runoff. Variations in topography, vegetative cover, and geologic structure further affect the pattern of runoff, as well as the use of surface and ground waters.

Precipitation

The Klamath River Basin within the study area has a mean annual precipitation of about 64 inches. Approximately 85 percent of the average annual precipitation occurs between October and March, with the remainder occurring as occasional summer storms.

Although the seasonal precipitation patterns appear somewhat abnormal during the study period due to the extremely wet or dry months (see Figure 2), the total annual rainfall was near normal. During the 1983-84 rainfall period, the total precipitation was about 110 percent of normal, with heavy rainfall during November and December and extremely low rainfall in January. The 1984-85 season had a total precipitation of about 84 percent of normal, with extremely heavy rainfall in November and much lower than normal rainfall during December and January. The 1985-86 year was about 96 percent of normal, with below-normal rainfall during November and December and above-normal rainfall in February.

Runoff

Runoff in that reach of the Klamath River between Hamburg and Orleans is influenced by two major stream systems, Indian Creek and Salmon River, and several minor tributaries. A summary of the hydrologic conditions found to exist within the system is shown in Table 1. The average annual runoff values are based on 30 or more years of record for each station.

The data in Table 1 show that the reach of the Klamath River between Seiad Valley and Orleans is located in a very high precipitation-runoff zone, since 50 percent of the flow at Orleans occurs from only 18 percent of the total drainage area. Flow in the Klamath River upstream of Hamburg is influenced by the regulation of several upstream reservoirs, power plants, and large irrigation systems. Tributaries to the Klamath River in the study area have unregulated flows with minor irrigation diversions. Indian Creek, with only one percent of the total Klamath River drainage above Orleans, contributes six percent to the Klamath River flow. The Salmon River, as well as other tributaries to the Klamath River, have high runoff-to-drainage-area ratios, which indicates these stream systems are also subjected to high levels of precipitation.

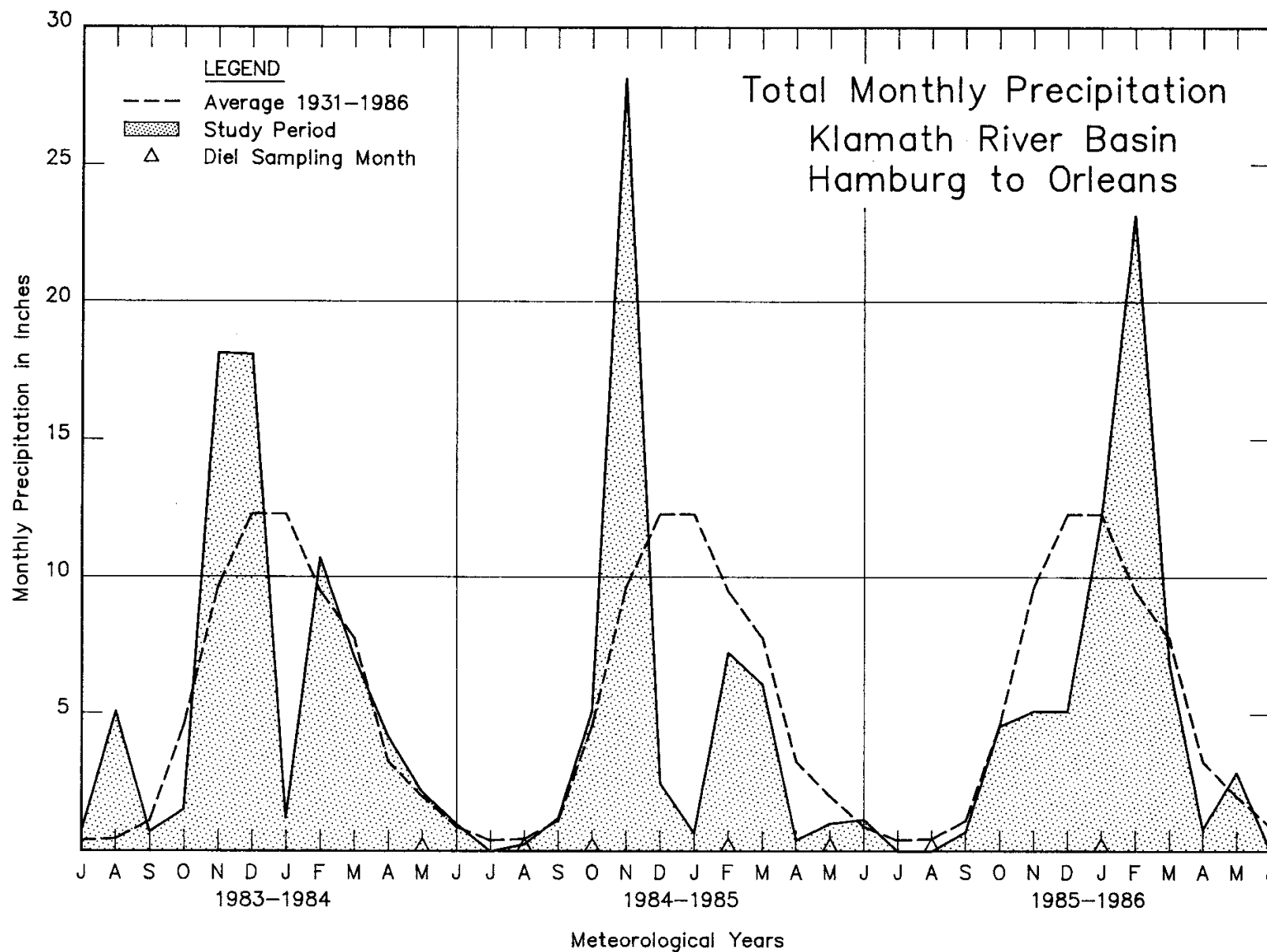


Figure 2

Table 1. Hydrologic Characteristics in the Study Area

<u>Station</u>	<u>Avg. Annual Runoff 1,000 AF</u>	<u>Drainage Area Sq. Mi.</u>	<u>Runoff %</u>	<u>Drainage Area %</u>	<u>Ratio, Avg. Runoff to Drainage Area (AF/Sq. Mi.)</u>
Klamath River near Seiad Valley	3,020	6,940	50	82	435
Indian Creek at Mouth	360	135	6	1	2,670
Salmon River at Somesbar	1,330	750	22	9	1,770
Other tributaries	1,350	650	22	8	2,080
Klamath River at Orleans	6,060	8,475	100	100	715

The flow characteristics of the Klamath River near Seiad Valley and Klamath River at Orleans, shown in Figure 3, reflect the influence of snowmelt and tributary inflow between these stations. Although less than 25 percent of the average annual precipitation falls from March through June, over 40 percent of the average annual runoff occurs during this period. The average annual flow in the Klamath River at Orleans is approximately 120 percent greater than the flow in the Klamath River near Seiad Valley, and during major storms, this percentage has exceeded 160 percent. Flows during 1984 were greater than 120 percent of normal, when the precipitation during the same period was 110 percent of normal. The runoff in 1985 was about 80 percent of normal, during which time the precipitation was also lower at 84 percent of normal. The same runoff pattern occurred during these years on the two major tributaries, Indian Creek and Salmon River.

River Profile

The Klamath River streambed from Sarah Totten Campground (F3-1460.00) to Orleans (F3-1220.01) has an elevation drop of about 1,150 feet over its 80-mile course, as shown in Figure 4. Although the average gradient in this reach of the river is considered moderate at about three feet per thousand feet, the streambed does vary, having steeper to flatter sections. In the steeper reaches of the river, water velocities are typically high, while flows in the flatter reaches normally have lower velocities. This is reflected in the stream bottom materials, which are typically sand, gravel, cobbles, and boulders in the steeper reaches and gravels, sand, and silts in the flatter reaches.

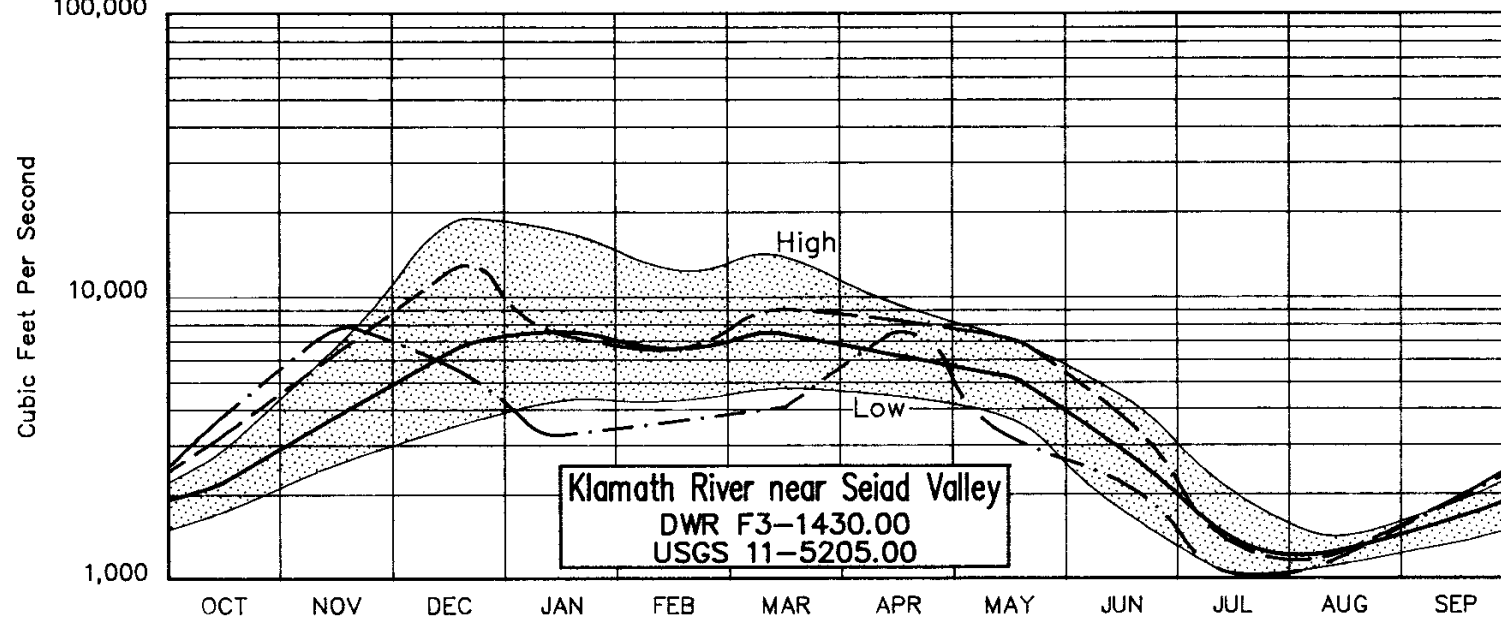
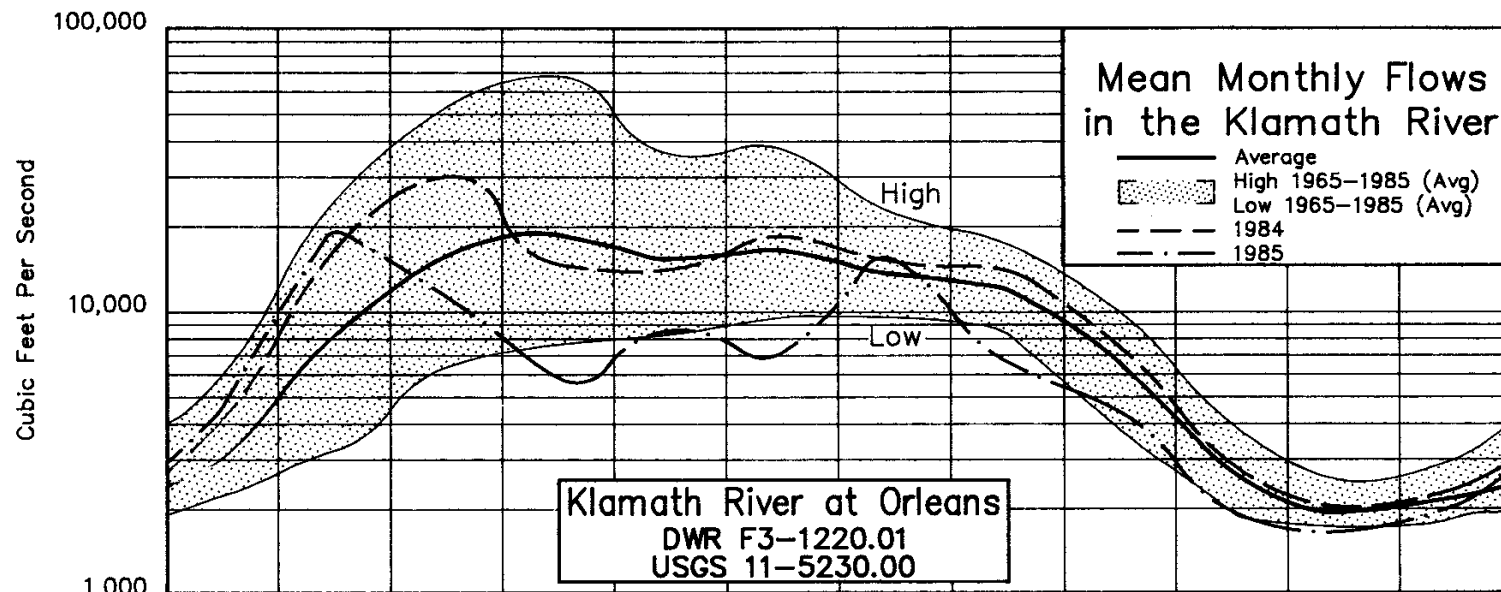


Figure 3

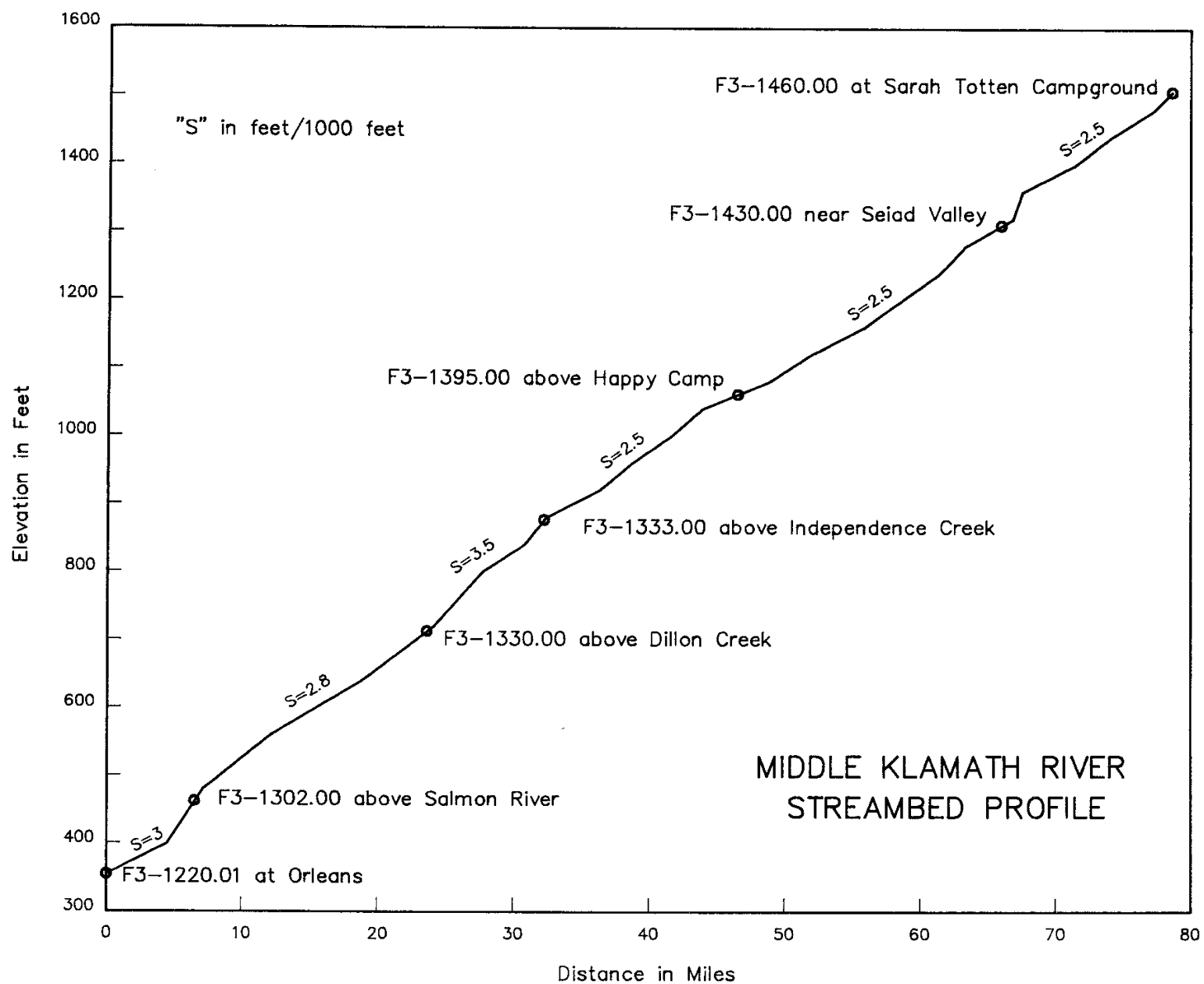


Figure 4

Water Use

In the Klamath River drainage upstream of the study area, Klamath River waters are stored and used extensively for power generation and to meet municipal, industrial, and agricultural demands. Downstream of Hamburg in the study area, these river waters are used primarily for instream uses, with some minor domestic, irrigation, and industrial diversions.

WATER QUALITY

To supplement historic data and help determine the quality of the Klamath River water in the reach between Hamburg and Orleans, sampling surveys were conducted from the spring of 1984 through early winter of 1986. The 13 stations shown as study stations in Plate 1 were sampled periodically to determine seasonal and diurnal variations. Several supplemental stations where historic data are available or which were sampled during the study are also shown in Plate 1. Measurements were made to determine the chemical and physical characteristics of this important water resource. The following sections present information on the water quality measurements, sampling procedures, and analytical methods.

Water Quality Parameters

The suitability of water for beneficial use is determined by its quality, which can be divided into three categories: chemical, physical, and biological. Historically, chemical and physical characteristics have been of primary concern, but increased emphasis on environmental concerns has promoted greater interest in biological quality. This category, which is more costly and difficult to determine, was not included in this study.

Chemical

Precipitation, as it reaches the earth, is an excellent solvent. It contains dissolved gases, such as carbon dioxide and oxygen, is slightly acidic, but normally contains few dissolved solids. As water passes through the hydrologic cycle, either on the surface or through the ground, it dissolves minerals from the materials it contacts. The amount and type of minerals dissolved reflect the composition of these materials and the hydrologic conditions governing the rate of water movement. Often, more salts and pollutants are added by sewage, industrial wastes, and irrigation return flows. These dissolved substances can determine water's suitability for various beneficial uses.

Dissolved mineral constituents in natural waters are commonly determined by ion concentration, total dissolved solids, or electrical conductivity. An indication of the overall chemical quality can be obtained by determining and summing the concentrations of individual ions in a water. A measure of the total dissolved solids (TDS) can also be obtained by filtering a water sample, drying it, and weighing the residue. A third technique measures the electrical conductivity (EC) of the water sample, as that value can be related to the ionic content of the water. Ions commonly found in natural waters and most often looked for in laboratory analysis include calcium, magnesium, sodium, potassium, bicarbonate, carbonate, sulfate, chloride, and boron. Each of these is important to one or more beneficial uses.

Another important chemical factor is pH, which is a measure of the water's acidity (hydrogen ion content). The pH scale ranges from 0 to 14, with a value of 7 being neutral. Most natural waters have a pH in the 6.5 to 8.5 range, while an acid, such as lemon juice, has a pH of about 2, and household ammonia has a pH of about 12.

Alkalinity is a measure of a water's ability to withstand changes in pH and is due to the carbon dioxide, bicarbonate, and carbonate equilibrium in the water. This buffering is important because it dampens pH fluctuations that might occur due to waste discharges or intense algal growth. It also serves as a source of inorganic carbon for plant growth.

Water contains varying amounts of certain elements which are essential to biologic productivity and are referred to as nutrients. Such metals as iron, copper, molybdenum, etc., are needed in trace amounts and are called micronutrients. Carbon, nitrogen, and phosphorus are needed in larger quantities and are referred to as macronutrients. The two elements most often considered limiting to primary productivity in aquatic systems are nitrogen and phosphorus. (If there were more of the limiting element present, there would be more growth).

Nitrogen is found in water as nitrate, nitrite, and ammonium ions, ammonia gas, or as part of nitrogen-bearing organic compounds. Most aquatic plants can use nitrate, ammonia, and perhaps simple organic nitrogen compounds.

Phosphorus is found in water as orthophosphates, polyphosphates, and organic phosphorus. Most forms are converted in nature to orthophosphates by bacterial action or hydrolysis, and this is the form used by organisms. Both orthophosphate and total phosphorus levels are often included in nutrient determinations.

Dissolved oxygen (DO) is one of the most important components measured in water because it is essential to aquatic plant and animal life. The amount of oxygen that dissolves in water is primarily a function of water temperature, air pressure (altitude), and dissolved mineral concentration. Natural aeration and oxygen from plant photosynthesis are the two most important sources of oxygen in surface waters. Dissolved oxygen is used in respiration by aquatic organisms and by biochemical demands created by decomposing organic materials. To maintain a healthy aquatic environment, DO levels should be near saturation for coldwater systems and above 5 mg/L for warmwater systems.

Physical

Temperature and turbidity are important physical characteristics of water. Temperature greatly influences the suitability of a water for its beneficial use. The metabolisms of aquatic organisms respond to the temperature of their environment. (As a general rule, metabolic activity will approximately double with each 10°C increase in temperature, to the limit of the organism's range of tolerance.) Temperature also affects the solubility of gases (a 10°C temperature increase will decrease oxygen solubility by ± 25 percent) and other substances in water, water density, and water viscosity. These factors are of great importance in aquatic environments.

Turbidity is the second important physical water quality characteristic often measured. Turbidity, or cloudiness, of water is caused by suspended matter, organic and inorganic, which obstructs the passage of light through the water. Highly turbid waters are unsightly and may pose a hazard for swimmers or other recreationists. Because light penetration is restricted in turbid waters, turbidity can reduce biologic productivity and limit types of plants that can exist.

Another measure of suspended matter in water is the suspended solid determination. It usually correlates with turbidity but is a better measure of the sediment being transported by a stream.

Sampling and Analytical Methods

Water samples were collected during this study from near the center of flow at each station. At low flows, samples were usually collected by wading, while at higher flows, samples were collected from bridges or by sampling from the river bank. Most samples were collected in plastic buckets. Temperature, pH, DO, and EC measurements were usually made at the time of each visit, while water samples were collected for analysis at the Department's laboratory in Bryte.

Temperatures were measured with standard field thermometers whose calibrations had been checked in the laboratory. During some diel surveys, maximum-minimum thermometers were also placed in the river to verify the temperature variations measured during sampling visits.

Field pH was determined by using Hellige comparators with appropriate indicator solution and disk. Laboratory pH analyses were also run on selected samples with a calibrated glass electrode-type pH meter.

Dissolved oxygen levels were measured at the time of sampling, using the modified Winkler technique. Field kits use fixing reagents in powdered form.

Electrical conductivity was measured on portable Beckman solubridges that had been checked on known solutions. Selected samples that were sent to the laboratory also had EC determinations made for quality control and to better define the TDS-EC relationship.

Turbidity samples were measured with a Hach Model 2100A turbidimeter which is a nephelometer-type instrument.

Samples for standard mineral (chemical) analysis were collected in sample-rinsed plastic bottles and transported to the Bryte laboratory for analysis. Table 2 lists the standard laboratory methods used.

Trace metal samples were collected in plastic buckets or dipped directly from the river. Special acid-rinsed bottles were used for sampling. Double-distilled nitric acid was added to reduce the pH to 3, and the samples were transported to the laboratory.

Table 2. Analytical Methods for Water Quality Parameters

<u>Parameter</u>	<u>Method</u>
Electrical Conductivity	Beckman Wheatstone Bridge
Total Hardness	EDA - Titrimetric - AWWA
Sodium	Flame Photometric - AWWA
Potassium	Flame Photometric - AWWA
Sulfate	Gravimetric - AWWA
Chloride	Argentometric - AWWA
Boron	Carminic - AWWA
Arsenic	Silver Diethyl - AWWA
Barium	Atomic Absorption Spectrophotometric
Cadmium	Atomic Absorption Spectrophotometric
Chromate	Atomic Absorption Spectrophotometric
Copper	Atomic Absorption Spectrophotometric
Iron	Atomic Absorption Spectrophotometric
Lead	Atomic Absorption Spectrophotometric
Manganese	Atomic Absorption Spectrophotometric
Zinc	Atomic Absorption Spectrophotometric
Mercury	Cold Vapor Atomic Absorption - EPA
Dissolved Nitrate	Brucine - AWWA
Total Ammonia	Distillation and Nesslerization - AWWA
Total Organic Nitrogen	Digestion and Nesslerization - AWWA
Dissolved Phosphate	Stannous Chloride - AWWA
Total Phosphorus	Stannous Chloride, Sulfuric Nitric Acid Digestion - AWWA

Nutrient (nitrogen and phosphorus series) samples were collected in plastic bottles and held in portable ice chests for delivery to the laboratory. When storage was expected to exceed 48 hours, samples were frozen and stored in a freezer.

STUDY RESULTS

Historic information and data were useful in designing the field investigation and providing a means of relating data developed during the abnormally dry years of 1976-1977 to normal conditions. Appendices A through D contain the surface water quality data developed during this study, as well as historic data. These appendices present data from the entire Klamath River drainage from Hamburg downstream to Orleans. Sampling stations are shown in Plate 1, and data are arranged according to sample station number. Data for each station are arranged chronologically.

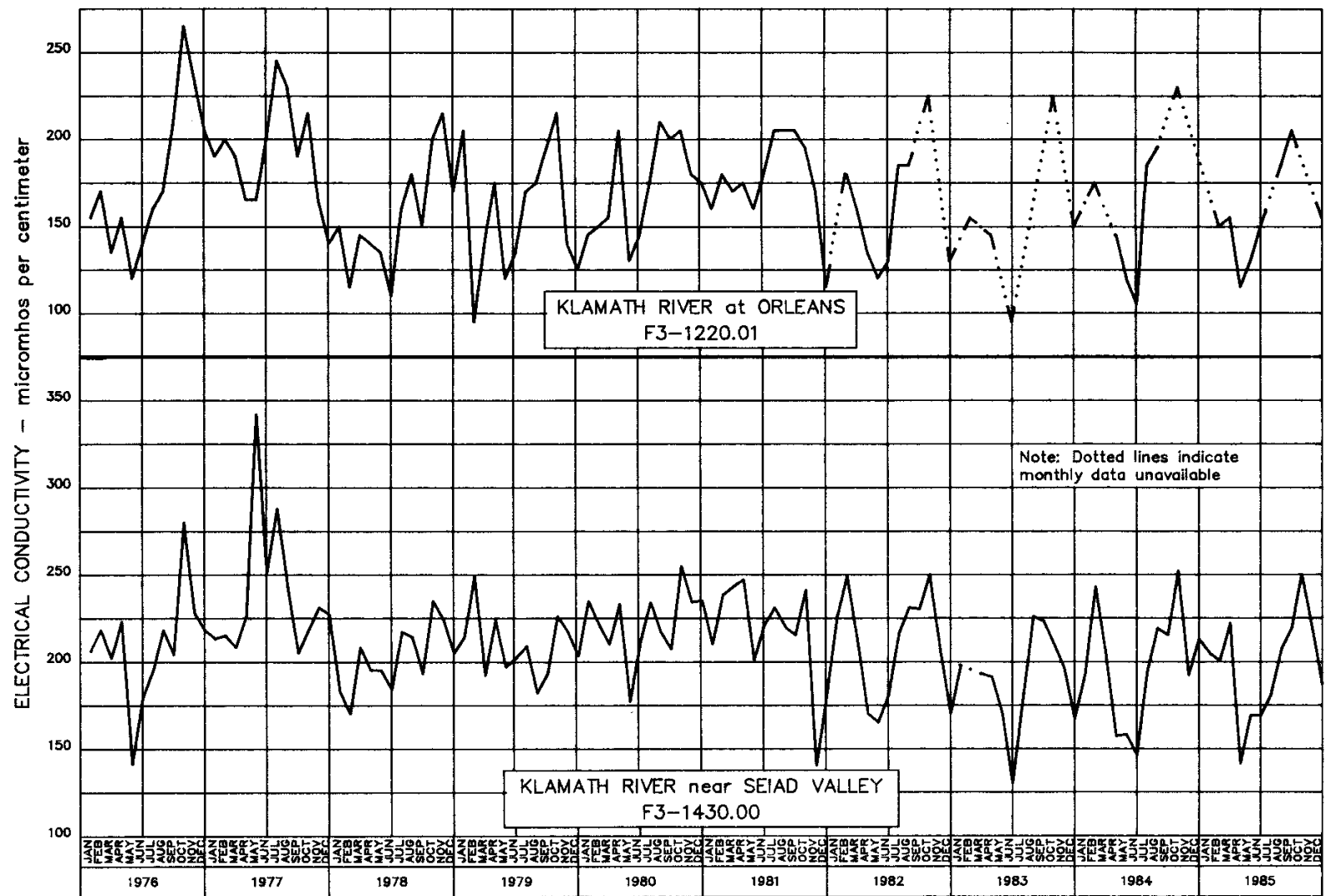
Chemical Characteristics

The Klamath River waters above Hamburg have as their major sources streams that drain some 6,900 square miles from Northern California and Southern Oregon and flow through several lakes and reservoirs, including Upper Klamath Lake, Copco Reservoir, and Iron Gate Reservoir. The Shasta and Scott River systems also contribute significant inflows to this reach of the Klamath River. These source streams deliver waters of excellent mineral quality. The EC values in the Klamath River normally range from 100 to 300 $\mu\text{mhos/cm}$ with an average of about 200 $\mu\text{mhos/cm}$ measured near Seiad Valley. Human interference with the normal hydrology in the upper reaches of the Klamath River involve winter runoff storage, pumpback schemes, periodic waste loadings from developed areas near Klamath Falls, and reservoir releases during periods of high algal productivity. When these delayed or modified waters are released, it prevents a normal cyclic EC pattern from developing downstream as far as Seiad Valley.

In this study reach, downstream from Hamburg, runoff from Indian Creek, the Salmon River, and several minor tributaries joins the Klamath River. These tributaries, which account for approximately half the flow at Orleans, are of excellent mineral quality, with EC values ranging from about 50 to 150 $\mu\text{mhos/cm}$.

Seasonal variation in EC is notable at most Klamath River sampling stations in the study area. Figure 5 gives monthly measurements of EC for the Klamath River near Seiad Valley (F3-1430.00), covering the period 1976-1985. As shown, EC values normally range from about 150 to 250 $\mu\text{mhos/cm}$ and fluctuate monthly, with an irregular pattern of high and low values. The EC pattern is quite variable from year to year, reflecting both the variation in precipitation and the operation of upstream development. The effect of the drought and reduced runoff conditions on EC in 1976-1977 is apparent in Figure 5 because most of the monthly measurements are above 200, with a maximum near 350 $\mu\text{mhos/cm}$.

However, in January 1978, winter runoff dropped the EC of the river water at the Seiad Valley station below 200 $\mu\text{mhos/cm}$. The maximum EC measured at this station has seldom exceeded 250 $\mu\text{mhos/cm}$, which indicates a total dissolved solids content of about 175 mg/L. Figure 5 also shows the monthly EC measurements for the Klamath River at Orleans (F3-1220.01), which has a more normal seasonal pattern as a result of tributary inflow. These tributary



ELECTRICAL CONDUCTIVITY in the KLAMATH RIVER

inflows also have diluted the Klamath River water so that the EC levels are noticeably lower at this downstream station. The EC of the Klamath River at Orleans, with a mean value of 165 $\mu\text{mhos/cm}$ (compared to 210 near Seiad Valley), normally ranges from about 100 $\mu\text{mhos/cm}$ to between 200 to 255 $\mu\text{mhos/cm}$. These measurements indicate that the maximum total dissolved solids concentration seldom exceeds about 150 mg/L in the river near Orleans.

The Klamath River waters are bicarbonate in character but generally have no dominant cation. Analyses show that these waters have adjusted sodium adsorption ratios less than 3, which is considered excellent for irrigation.

Chlorides

Throughout the Klamath River, chloride levels are generally low. Even when flows are low and salt concentrations highest, chlorides have not been measured in excess of 15 mg/L. In the river near Seiad Valley, chloride concentrations usually range from less than 1 mg/L to about 10 mg/L and have a median value of 5 mg/L. Downstream at Orleans, the median chloride concentration is 3 mg/L, with values ranging from less than 1 mg/L to 8 mg/L. Data indicate that the tributaries in this reach have chloride levels less than 5 mg/L.

Sulfates

The sulfate ion concentrations in the Klamath River are very similar in pattern to the total dissolved solid and chloride concentrations in that the greatest concentrations are associated with low flows in the river upstream of Hamburg. In this reach, concentrations frequently exceed 10 mg/L and have been measured as high as 65 mg/L. The downstream tributaries to the Klamath River have sulfate concentrations that are usually less than 25 mg/L.

Boron

The average boron concentration in the Klamath River is 0.1 mg/L, with a maximum found at 0.6 mg/L. Most tributaries have low boron levels ranging between 0 and 0.2 mg/L, with a maximum value found at 0.4 mg/L.

pH and Alkalinity

The pH of the Klamath River is quite variable, usually ranging from about 7.0 to 9.0. The highest pH values generally occur during the summer low-flow periods, when biological productivity is at maximum levels.

Alkalinity also varies greatly but rarely exceeds 120 mg/L. Alkalinity levels are similar to the EC in seasonal and areal variation. The minimum levels are about 40 mg/L and occur during the winter and spring runoff periods. Tributary waters also have low alkalinity levels and account for the drop in mean alkalinity from 87 mg/L in the Klamath River near Seiad Valley to a mean value of 71 mg/L at Orleans.

Nutrients

Determinations of the nutrients, nitrogen and phosphorus, were made from selected samples during this study. Nitrogen was analyzed as nitrate (NO_3), ammonia (NH_3), and organic compounds, whereas phosphorus was analyzed as orthophosphate (PO_4) and total phosphorus (P). A summary of the nutrient concentrations for the two stations with historic data that represent the upper and lower reaches of the study area is tabulated below.

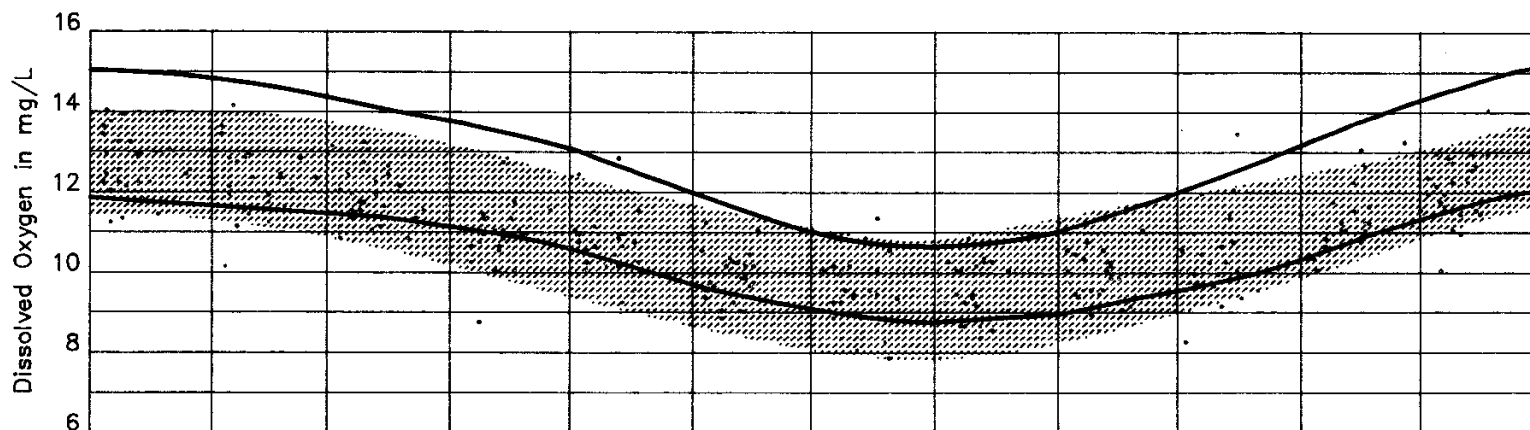
	NO_3 (mg/L)		$\text{NH}_3 + \text{Org. N}$ (mg/L)		PO_4 (mg/L)		Total P (mg/L)	
	Range	Median	Range	Median	Range	Median	Range	Median
Klamath R. nr. Seiad Valley	0.0-1.35	0.27	0.2-1.1	0.6	0.01-0.19	.07	0.0 -0.40	.11
Klamath R. at Orleans	0.0-0.52	0.08	0.1-0.6	0.4	0.0 -0.14	.03	0.02-0.67	.06

It is notable that nutrient concentrations in each form have been reduced by dilution as the Klamath River water flows down to Orleans.

Dissolved Oxygen

Dissolved oxygen data in Appendix A show that levels in the Klamath River are quite variable, particularly in the spring and summer when photosynthesis adds oxygen to the system and respiration consumes it. Figure 6, which shows the seasonal pattern of DO levels in the Klamath River near Seiad Valley (station F3-1430.00) and at Orleans (station F3-1220.01), is based on monthly daytime measurements taken over more than 20 years of monitoring. This annual pattern is typical of other Northern California rivers having higher oxygen levels in the winter months due to the higher solubility of oxygen in cold water and lower concentrations during the months of June, July, and August, when the water is warmer and biological processes affect the system.

Data collected during diel surveys, shown in Figures 7 through 15, verify that the richness of the Klamath River results in fairly large fluctuations in DO during the summer months. As shown on Figure 9, diel DO variations have been measured in excess of 4 mg/L at Klamath River above Happy Camp (station F3-1395.00). These data show the fluctuations in DO, which are typical of moderately productive water that becomes supersaturated (as high as 140 percent) during daylight hours. During periods of reduced light, oxygen is produced during photosynthesis and drops below saturation due to respiration demands. Minimum DO levels generally range between 7 and 8 mg/L along the Klamath River between Hamburg and Orleans and are considered tolerable for most fisheries needs.



Dissolved Oxygen and Temperature in the Klamath River

▨ Klamath River near Seiad Valley F3-1430.00

== Klamath River at Orleans F3-1220.01

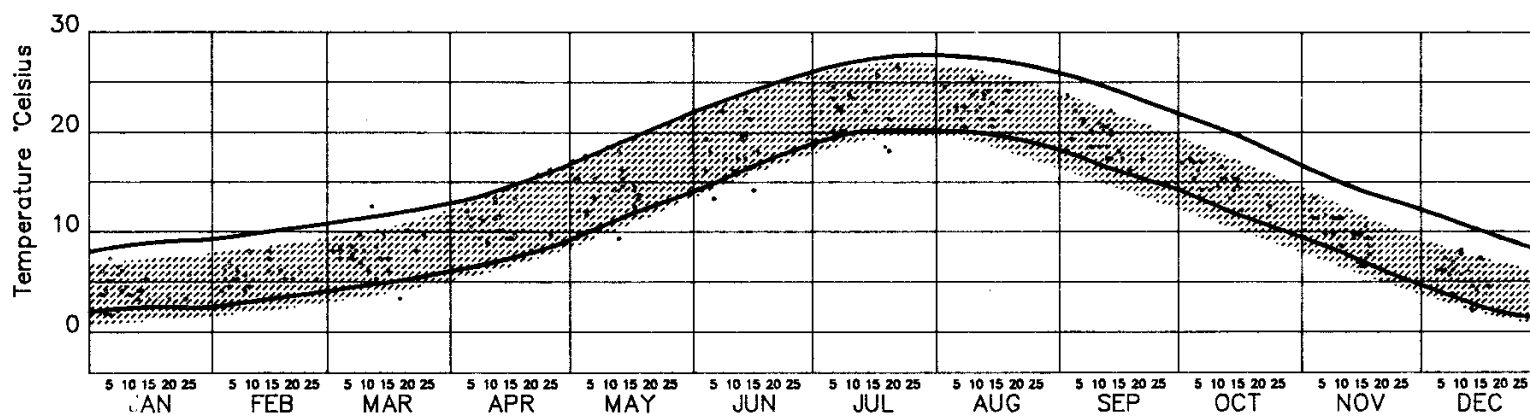


Figure 6

Diel DO levels in the tributaries, shown in Figures 16 through 19, follow patterns typical of lower levels of biological productivity. These tributaries had low summer DO values of 8.2 mg/L or greater, maximum DO fluctuations less than 2 mg/L, and saturation values that remained nearer to 100 percent.

Physical Characteristics

Temperature and turbidity are important characteristics that influence the Klamath River's suitability for beneficial use. Each of these parameters shows significant annual variations.

Temperature

Within the Klamath River system, seasonal temperature changes are large. Monthly daytime measurements made near Seiad Valley (station F3-1430.00) and at Orleans (station F3-1220.01) show a typical seasonal pattern, with a wide range of temperatures ranging from winter lows of about 1°C in January to a summer high of 27°C in July (Figure 6).

The water temperatures measured during this investigation appear normal, with summer highs near 26°C and late winter lows of 4°C. Measurements made during the diel surveys showed changes at each of the stations on the Klamath River between 2° to 4°C in February, while in August the 24-hour change varied from 2.0° to 9.3°C (Figures 7 through 15).

The highest peak temperatures during the August 1985 diel were consistent at 25°C from Hamburg to below Happy Camp. The downstream effect of the inflowing tributaries causes the high temperatures to gradually decrease to 23°C at Orleans. The low summer temperatures varied during the August 1984 diel, with the lowest measured at the Sarah Totten Campground (station F3-1460.00). The greatest diel change of 9.3°C measured in the Klamath River during this study was also measured at this station. At this station, streamflow characteristics and ambient temperature differences could combine to allow a greater heat loss during nighttime hours. The summer diel fluctuations generally decrease as the river flows downstream, with a minimum fluctuation of 2°C occurring at Orleans (station F3-1220.01).

In the tributary waters of the Klamath River, high summer temperatures between 21° to 24°C were observed, with temperature variations that ranged from 3° to 7°C (Figures 16 through 19). At station F3-2329.00 near the mouth of Indian Creek, the maximum temperature was observed in May 1984. It reached 26°C, with a temperature variation of 9.3°C. During the February diel, the maximum water temperature in the tributaries dropped to 8°C, and diel variations were less than 4.5°C.

Turbidity

Turbidity patterns in the study reach of the Klamath River are similar to those found in other rivers of Northern California, in that the turbidity levels tend to increase with flow and increase in a downstream direction. In the Klamath, this pattern is also apparent but only during periods of high precipitation and runoff. The station downstream at Orleans (F3-1220.01) is usually less turbid than the station near Seiad Valley (F3-1430.00). This is mainly the result of inflowing tributaries, such as the Salmon River, that are clear under normal flow conditions.

Highest turbidities usually occur during the high flows of January through April. A summary of turbidity measurements at stations where long-term monthly data are available shows the upper station near Seiad Valley has a median turbidity of 4 NTU (Nephelometric Turbidity Units), with a minimum of 0 NTU and a maximum of 170 NTU. The lower station at Orleans, influenced by the inflowing tributaries, has a median turbidity of 3 NTU, with a minimum of 0 NTU and a maximum of 360 NTU.

At these levels of turbidity, the Klamath River often appears turbid, usually with a brownish-gray organic color that is probably due to the presence of humic materials.

Suspended Solids

Suspended solids make up that portion of the total solids content that can be separated from a sample by filtration. They can consist of both settleable and nonsettleable matter. These solids, as well as any nonfilterable colloidal solids, directly affect turbidity by scattering or absorbing light which can greatly reduce the light-transmitting properties in water. The suspended solids in surface waters normally contain both mineral and organic matter. The organic fraction, referred to as volatile suspended solids, is determined by oxidation under high temperature conditions. All classifications of the total solids found to exist in source waters are reported as concentrations in milligrams per liter.

Historic data of suspended solids concentrations in the Klamath River system are unavailable; however, samples collected and analyzed during the study period indicate that no significant variation exists in these waters. The median concentration found in the Klamath River between Hamburg and Orleans was about 6 mg/L, and values varied from 1 mg/L in late summer to a high of 12 mg/L during early spring high-runoff conditions. During the same period, the median concentration of volatile suspended solids was 2 mg/L, with a fluctuation from 1 mg/L to a high of 6 mg/L. In the tributary river systems, the median concentration of suspended solids was about 2 mg/L, with values ranging from a low of 1 mg/L to a high of 6 mg/L. The volatile suspended solids, with a median value of 1 mg/L, ranged from 1 mg/L to a high of 4 mg/L. The magnitude of these suspended solids appears consistent with other Northern California rivers with relatively high concentrations during winter runoff conditions and lower values during the low-flow summer months. The concentrations of volatile suspended solids do indicate a relatively high percentage of organic material.

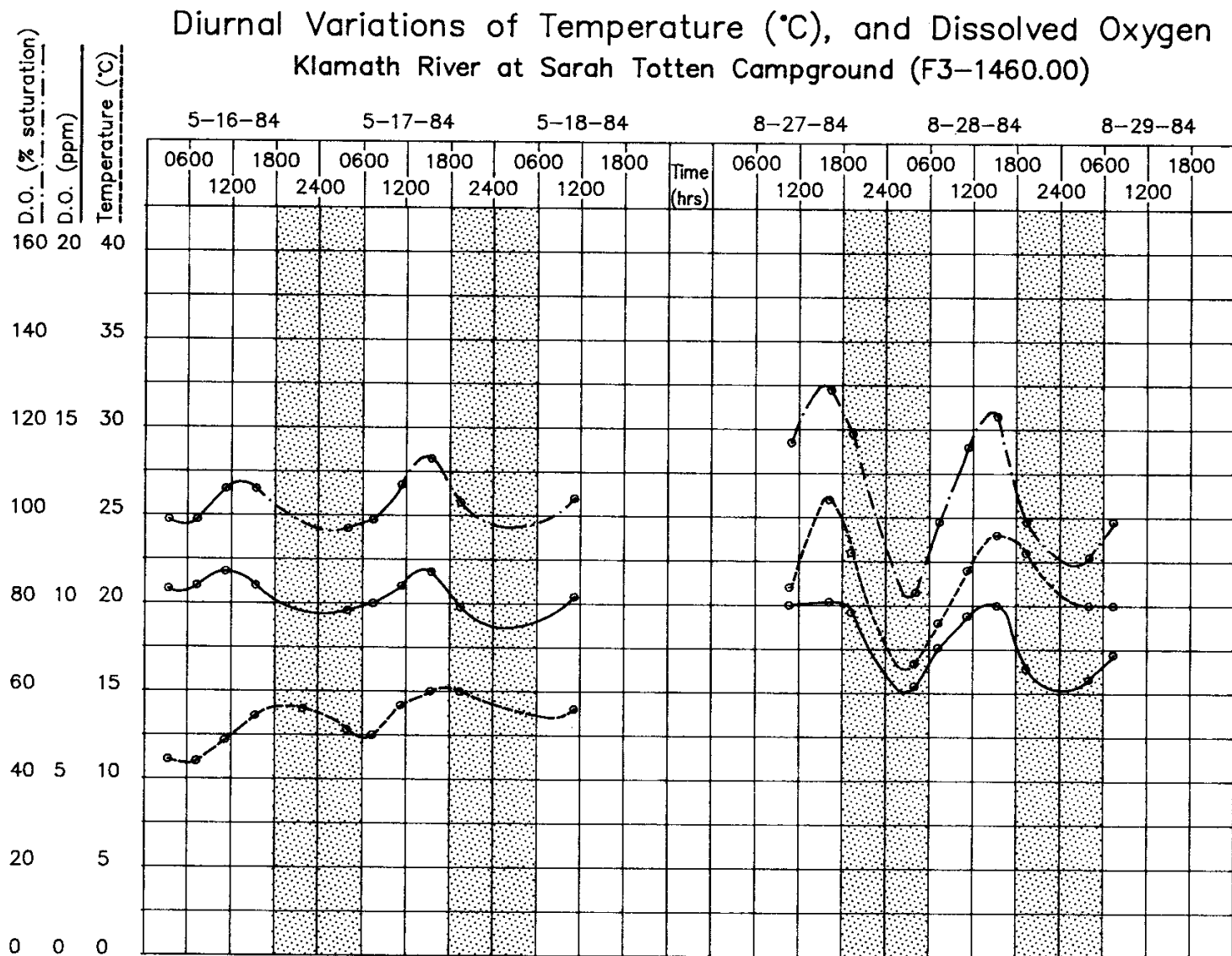


Figure 7

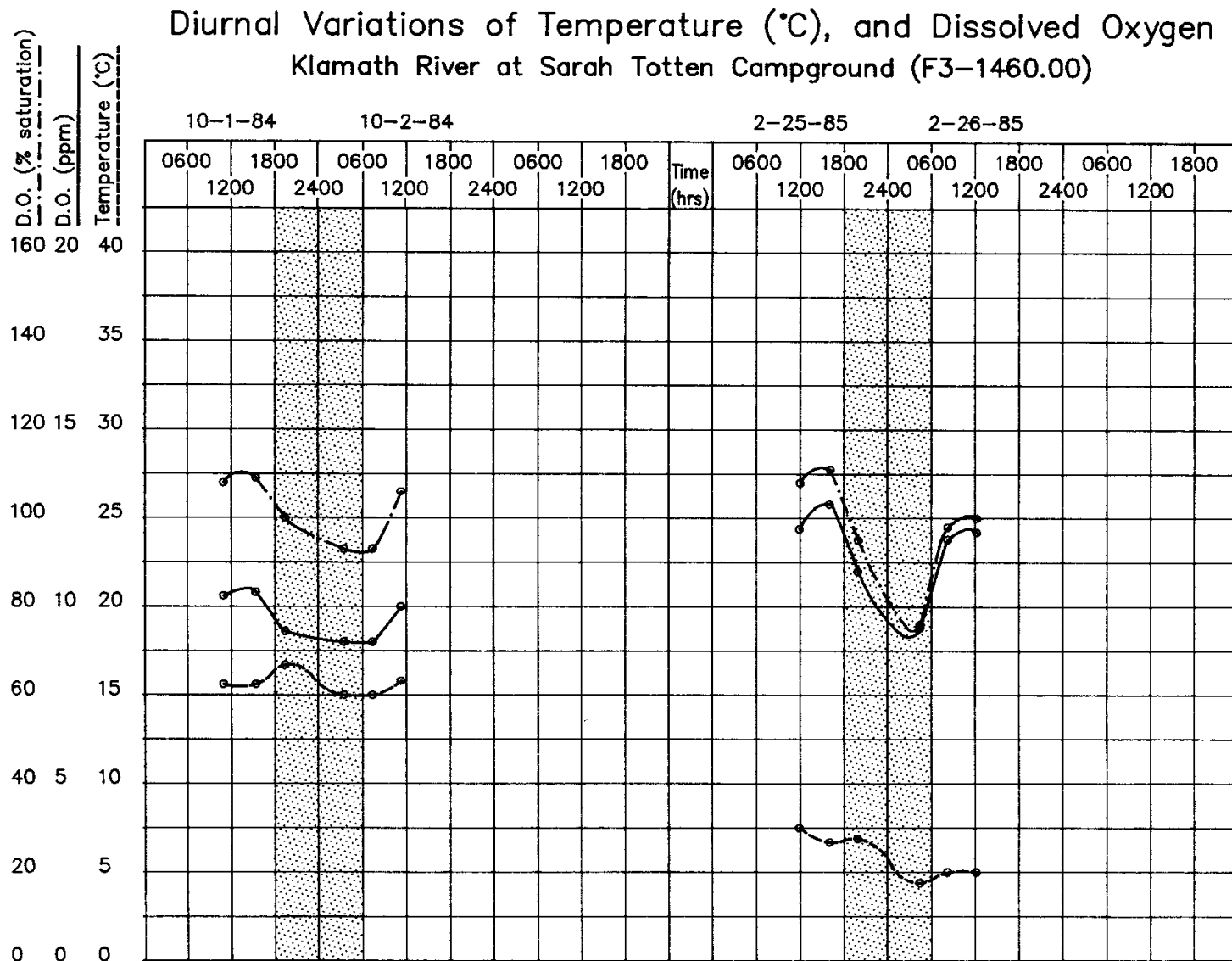


Figure 7

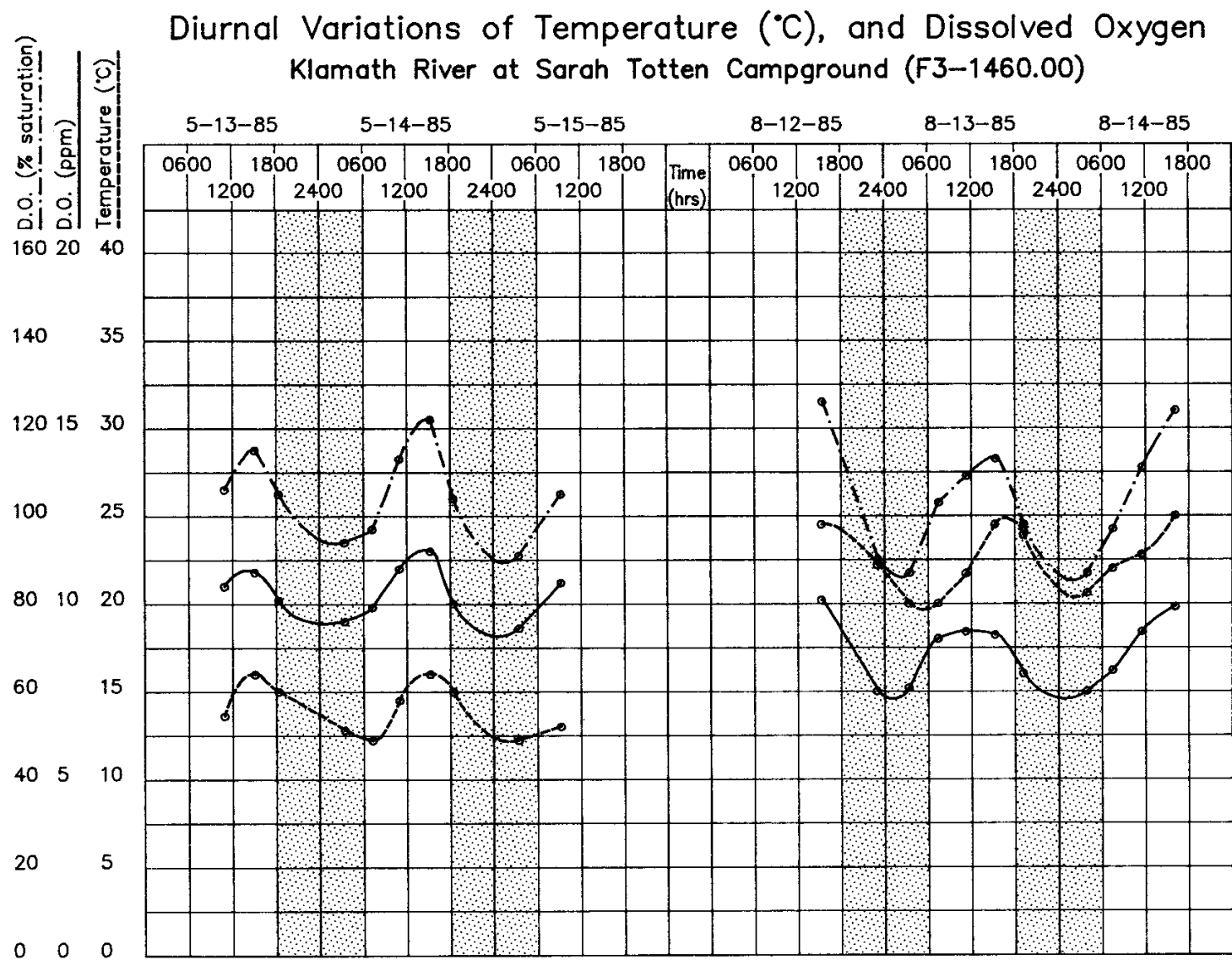


Figure 7

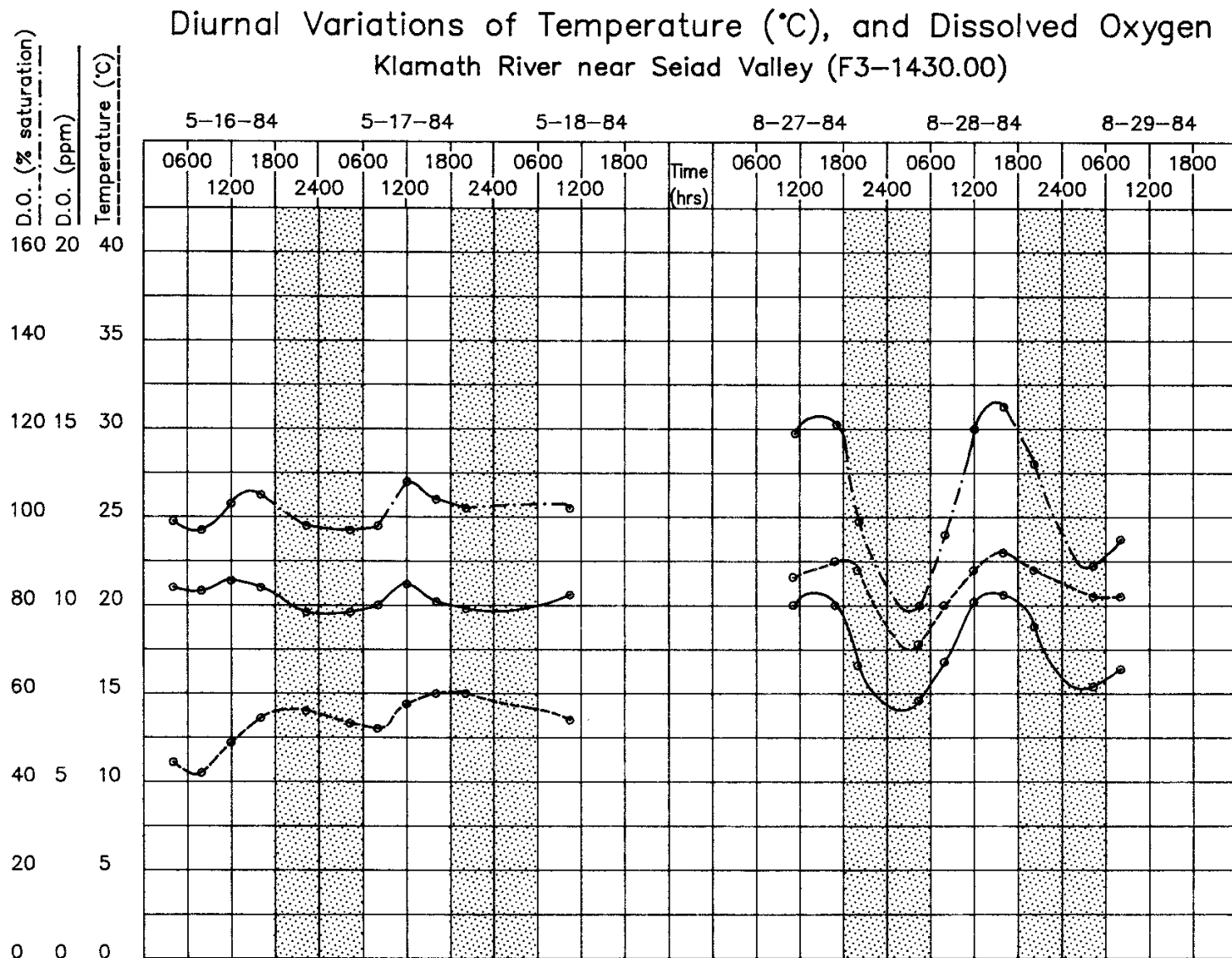


Figure 8

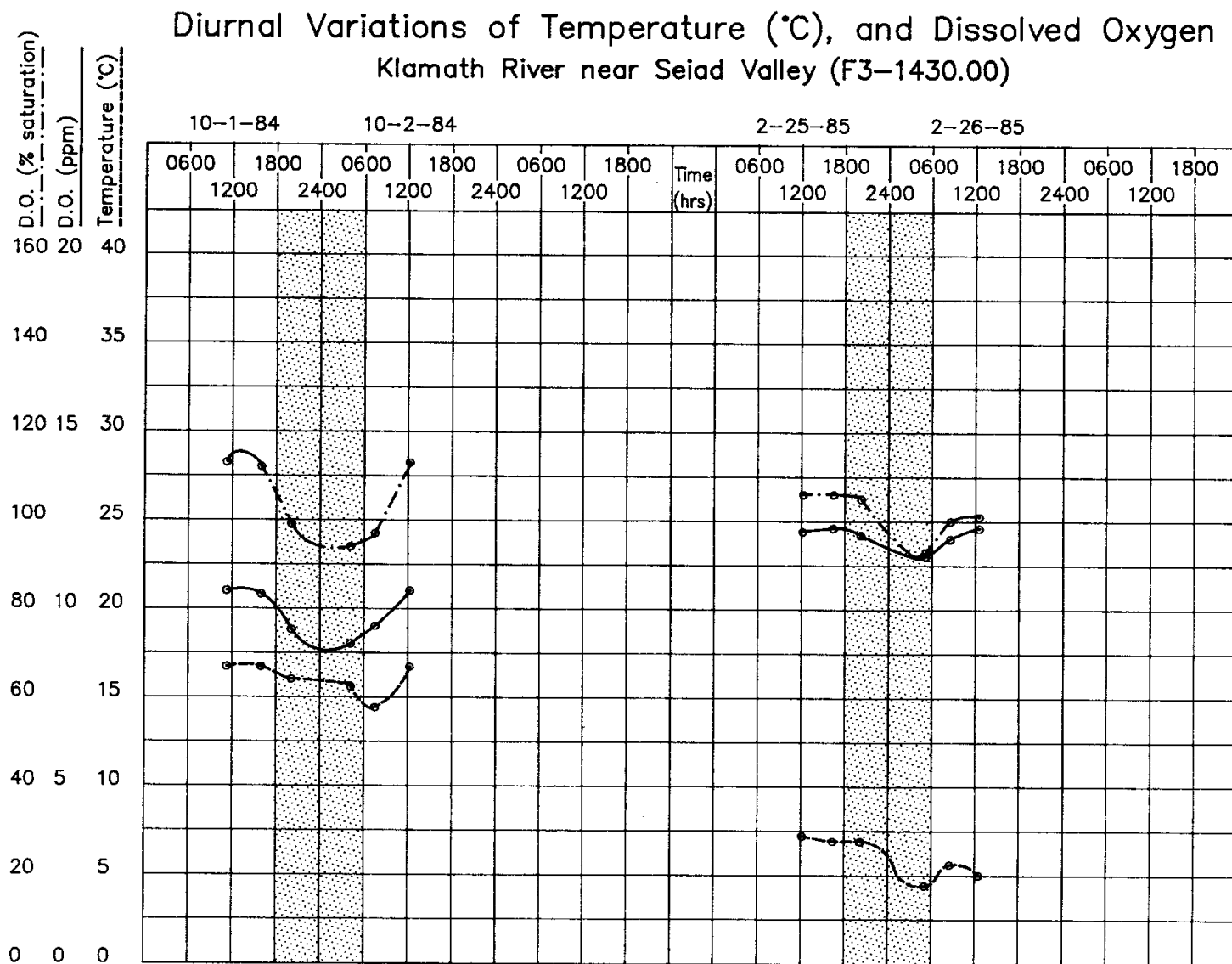


Figure 8

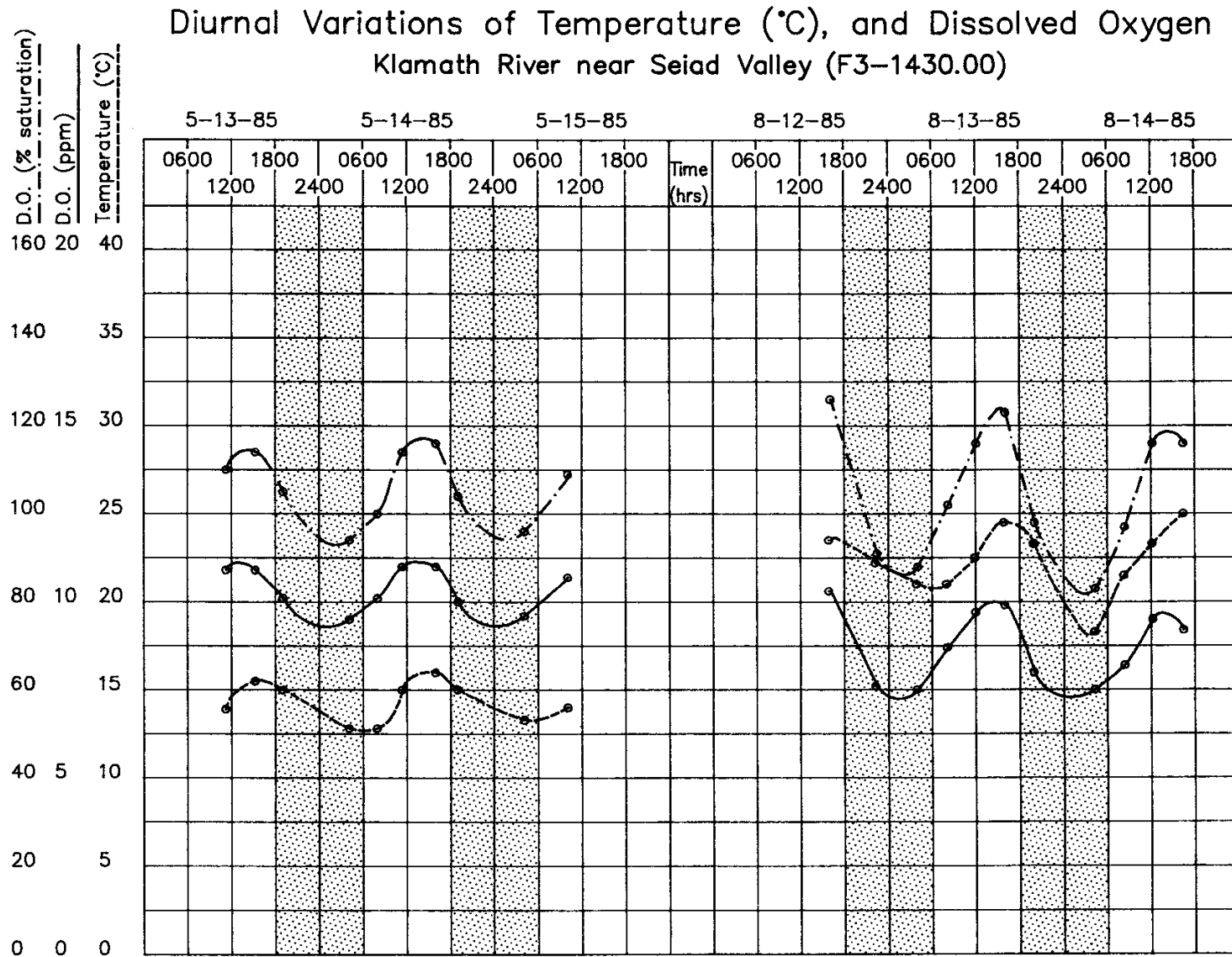


Figure 8

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Happy Camp (F3-1395.00)

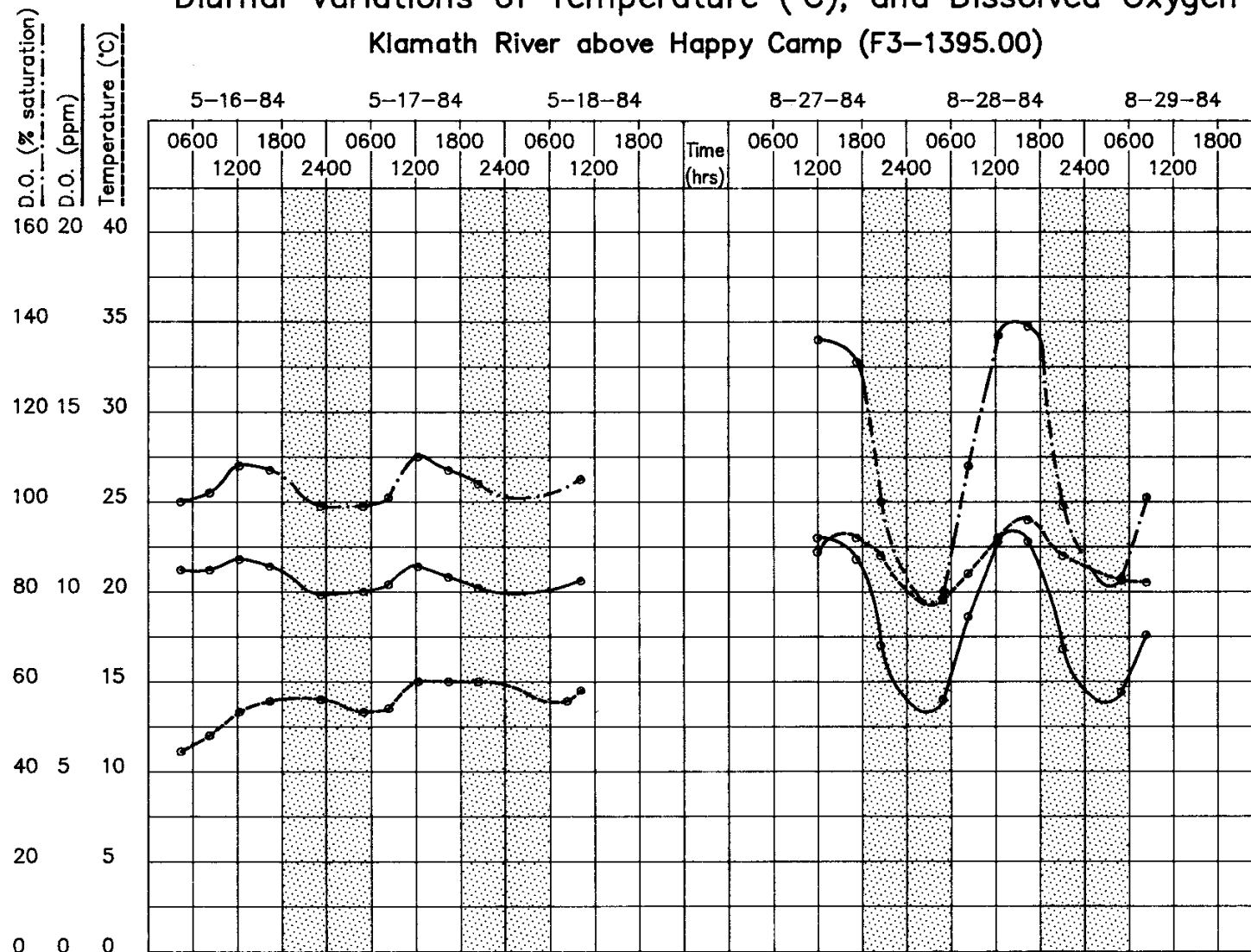


Figure 9

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Happy Camp (F3-1395.00)

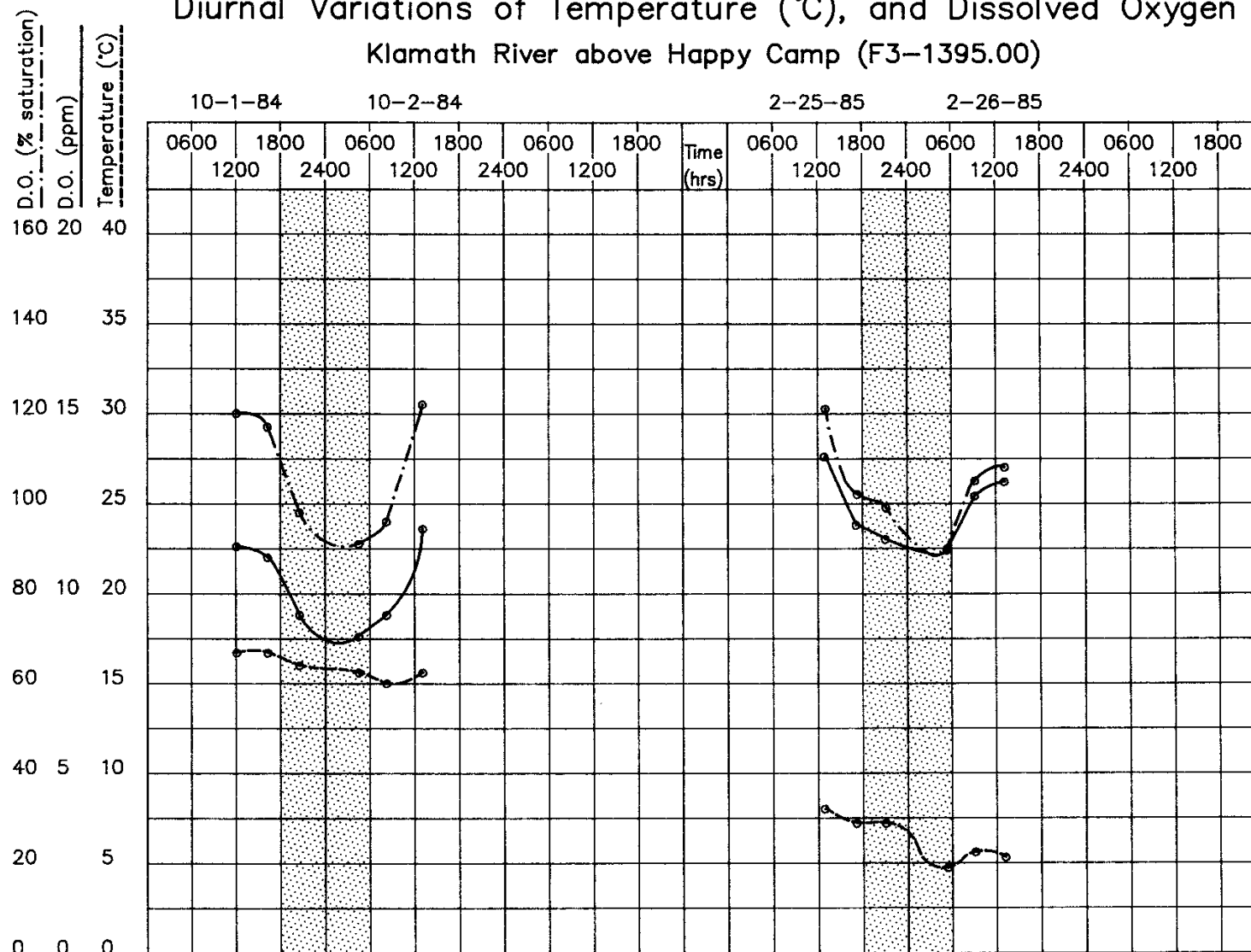


Figure 9

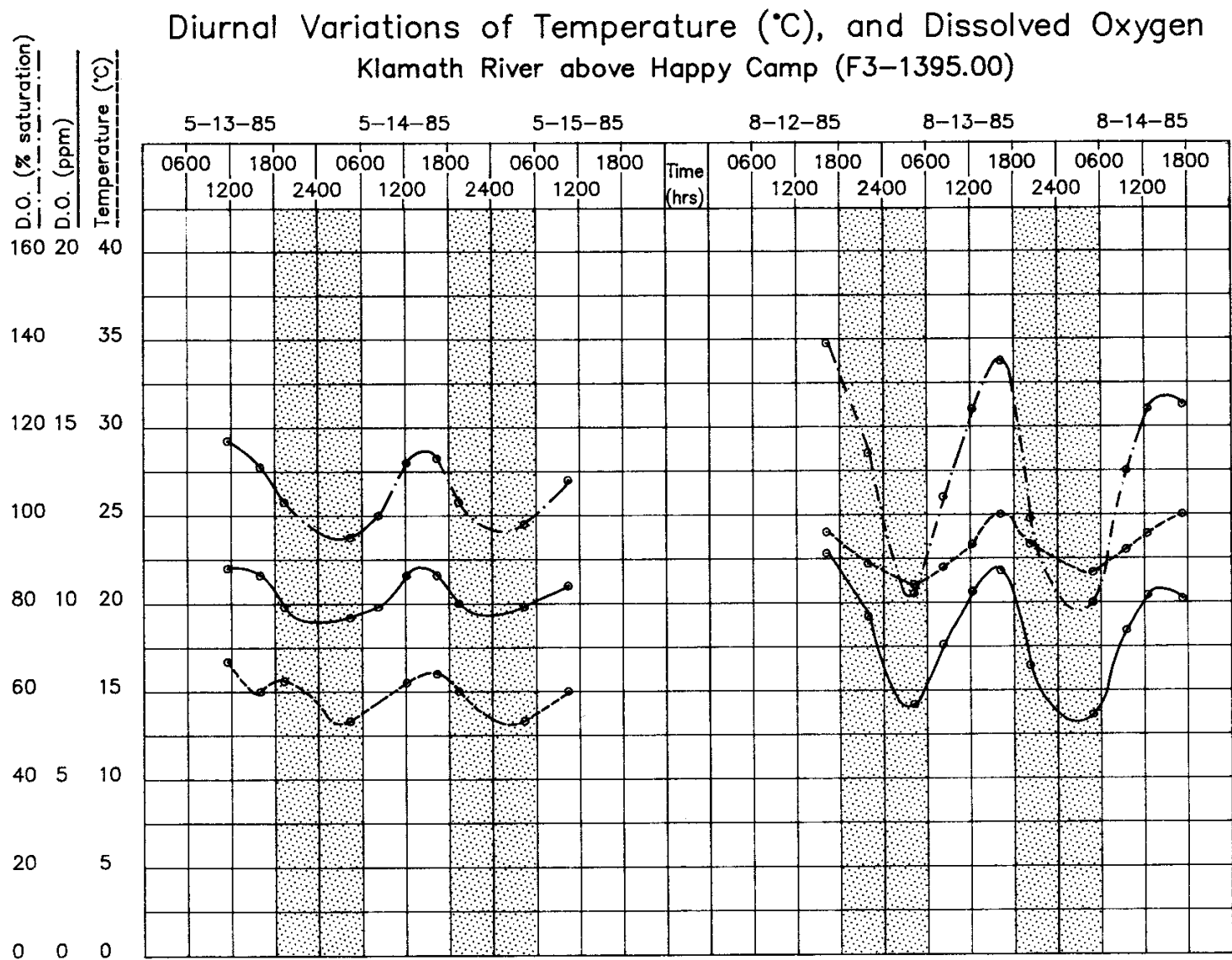


Figure 9

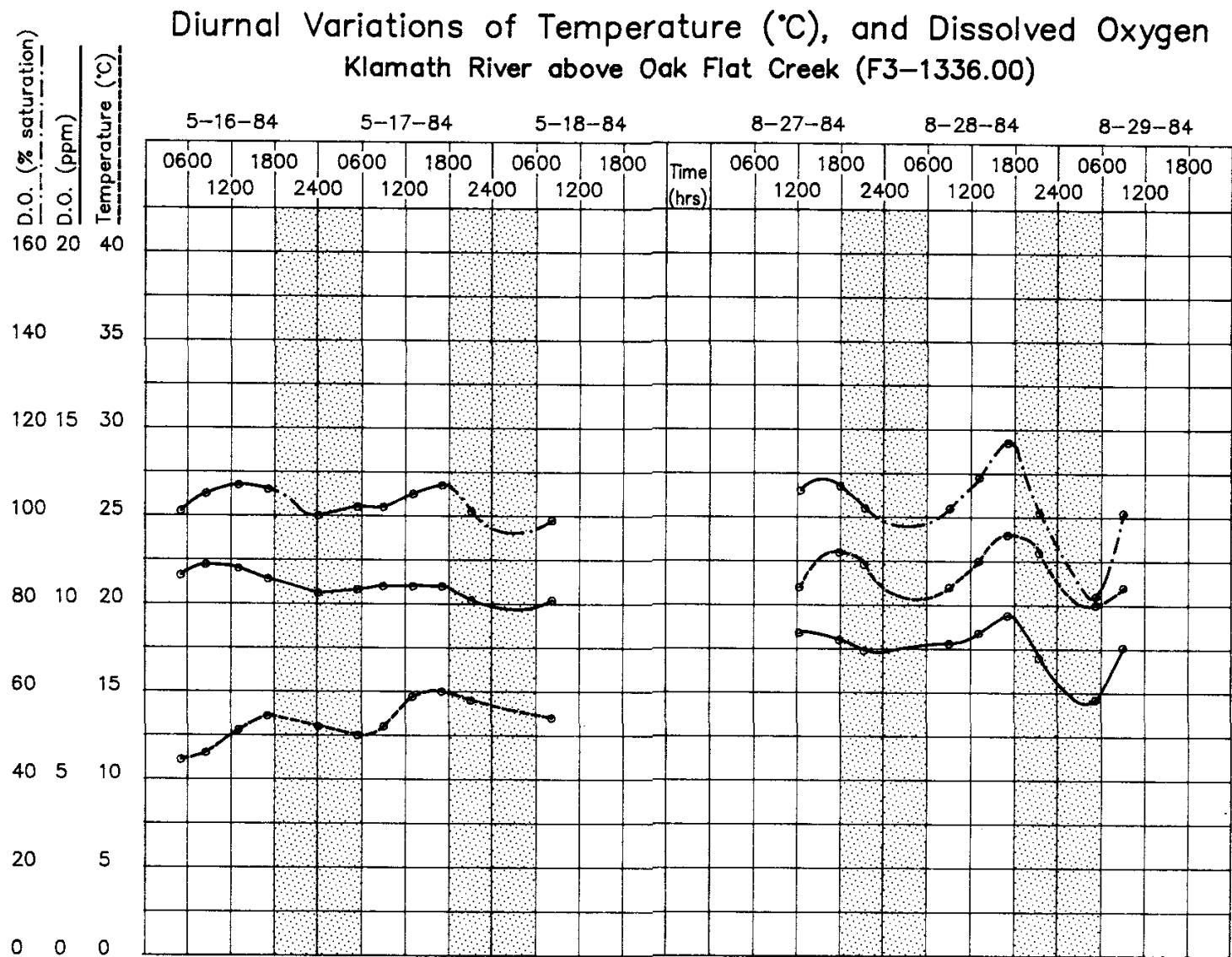


Figure 10

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Oak Flat Creek (F3-1336.00)

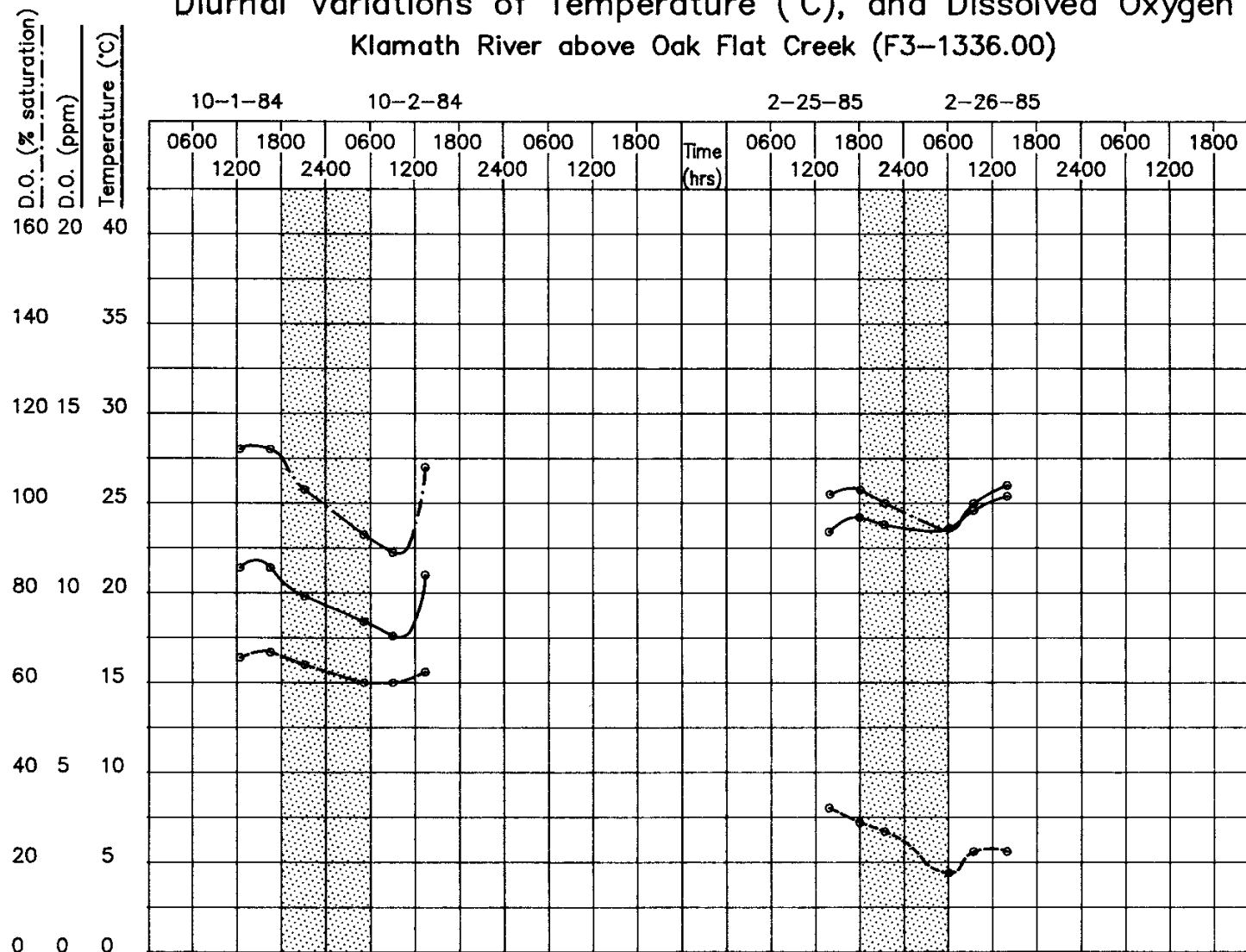


Figure 10

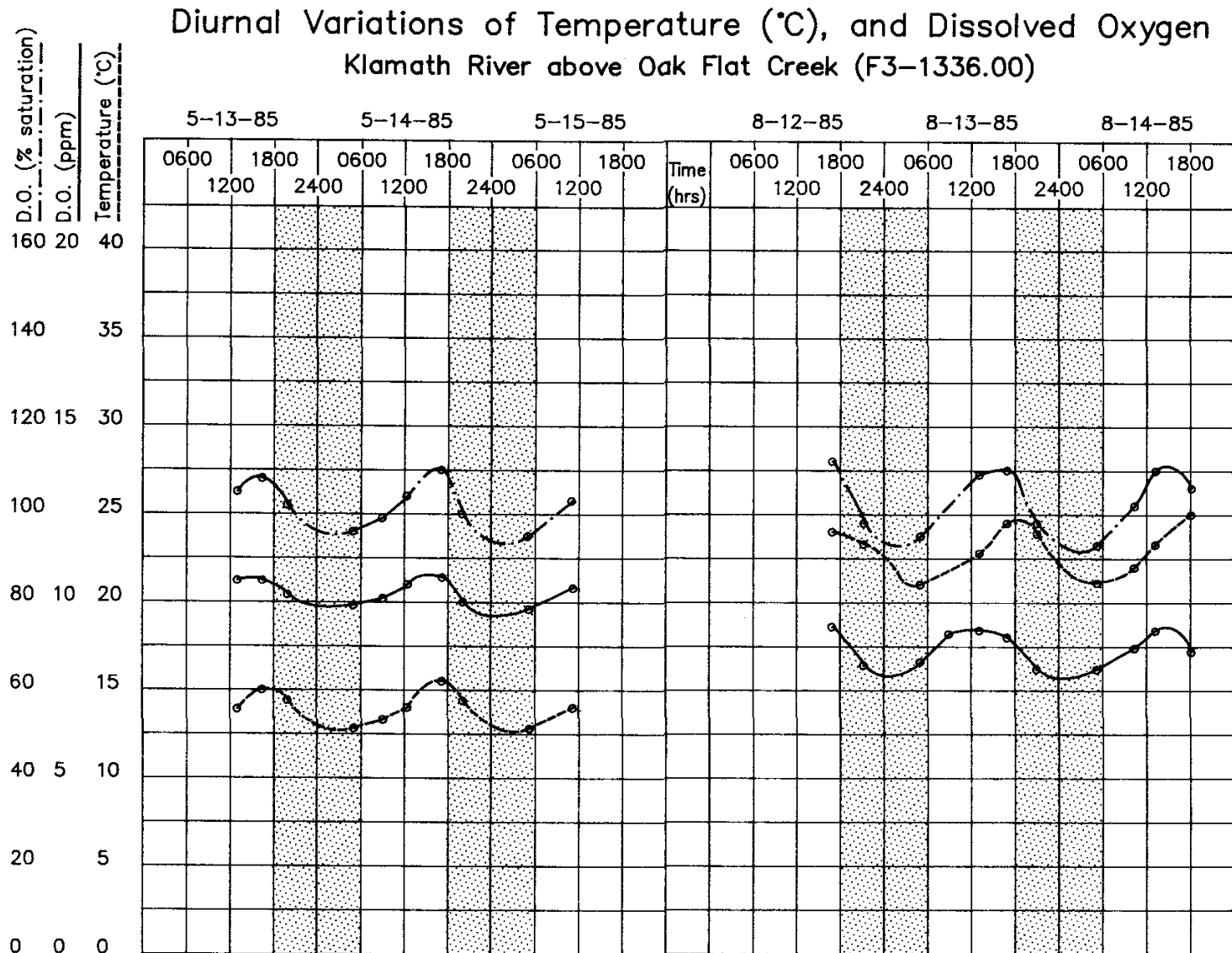


Figure 10

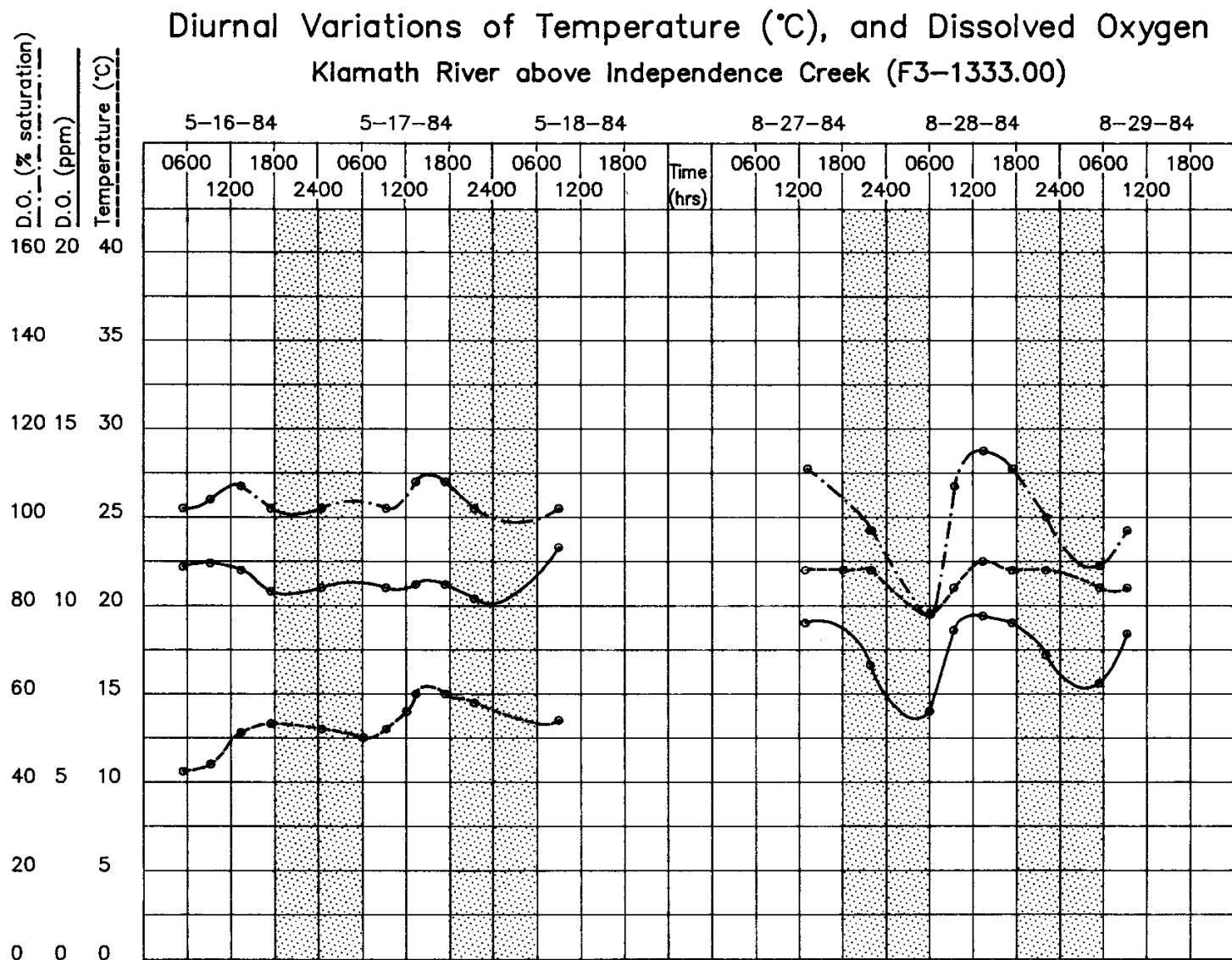


Figure 11

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Independence Creek (F3-1333.00)

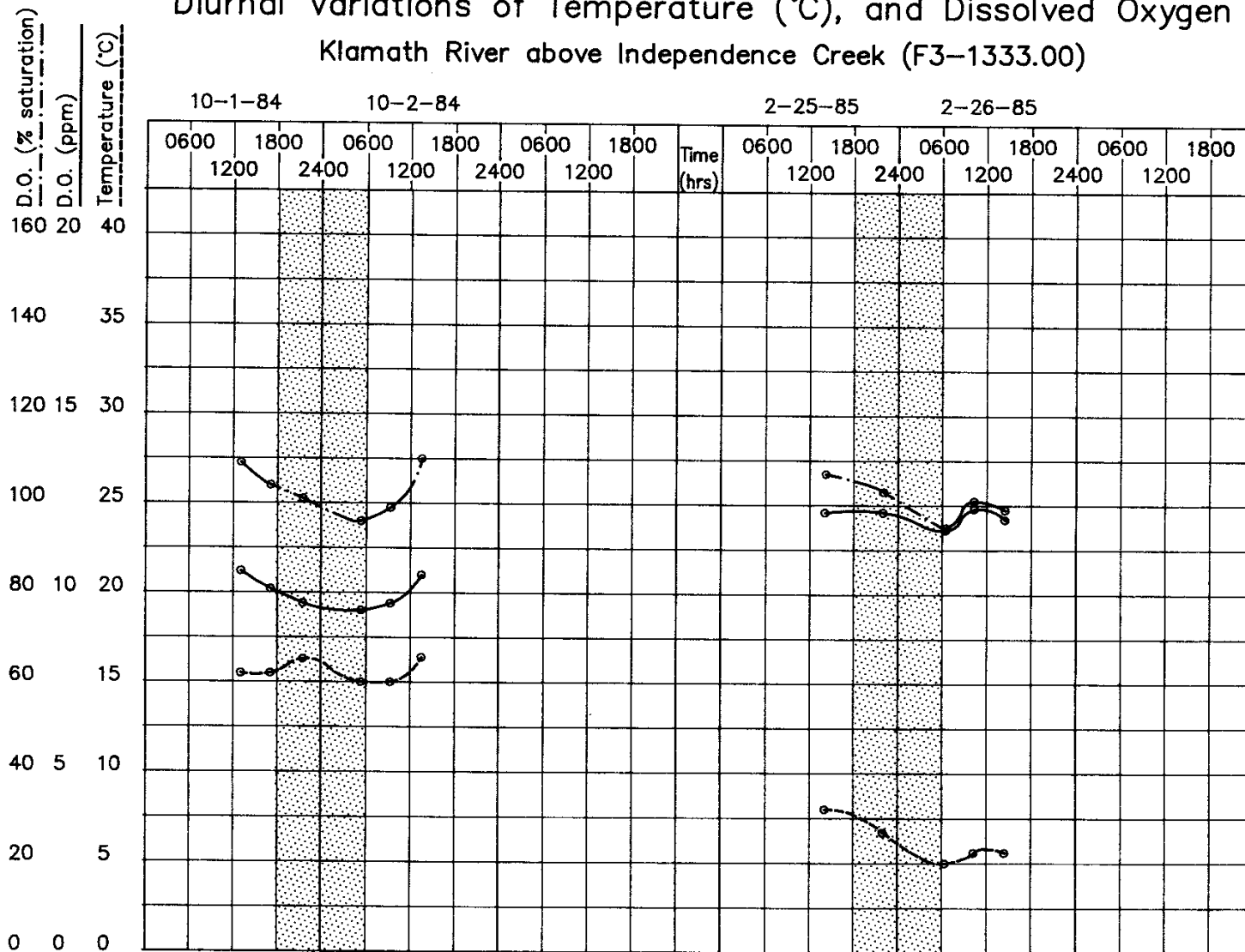


Figure 11

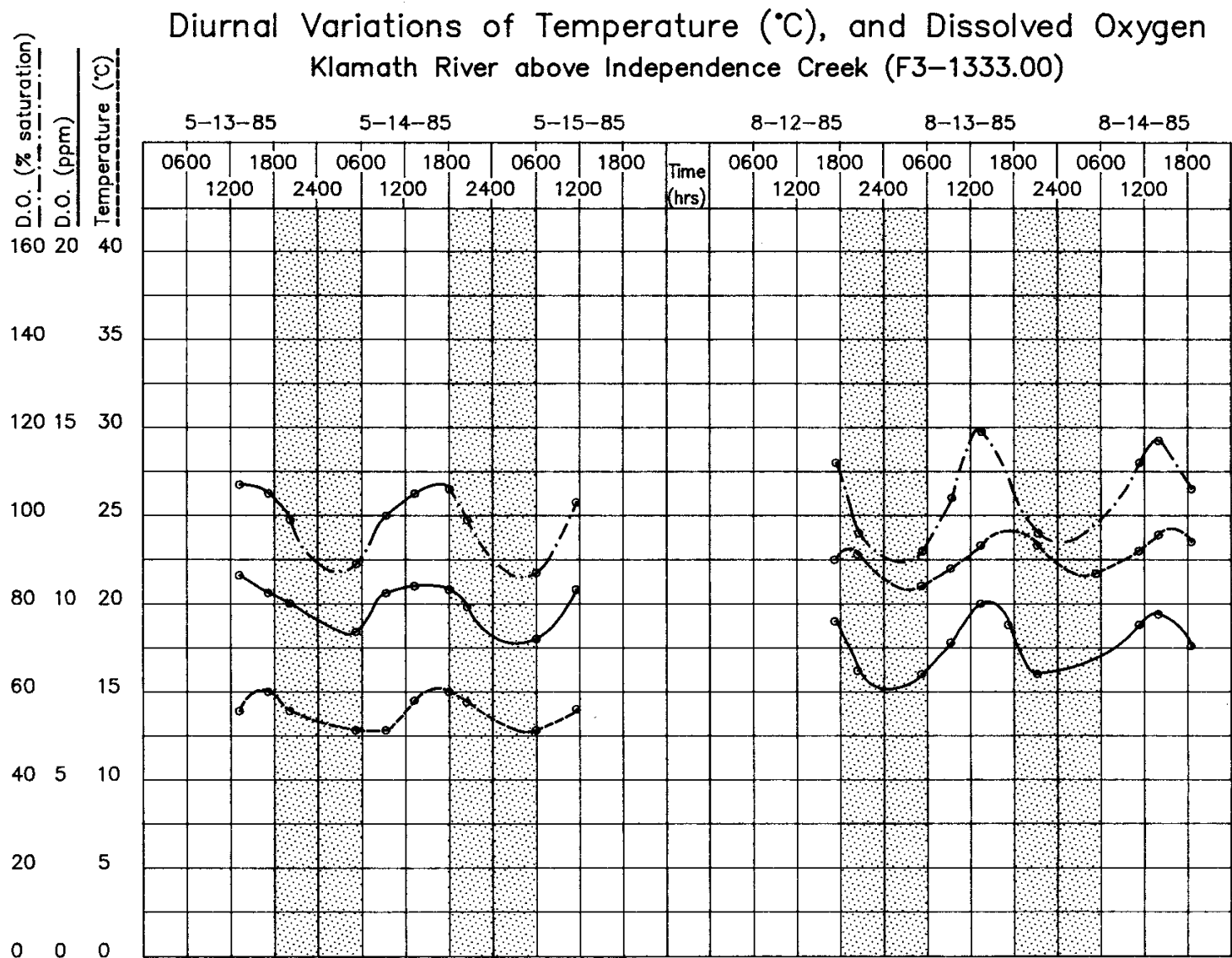


Figure 11

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Dillon Creek (F3-1330.00)

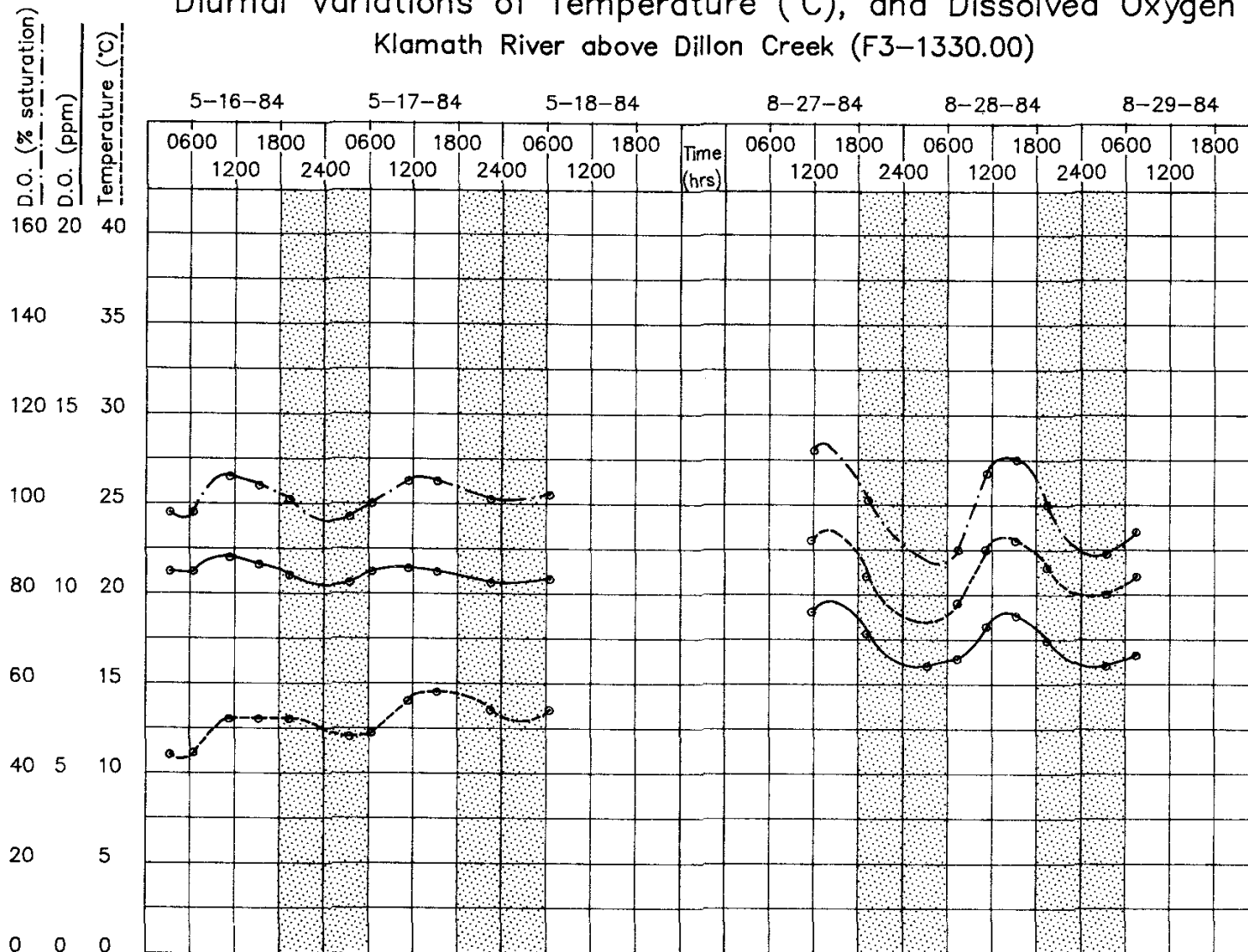


Figure 12

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Dillon Creek (F3-1330.00)

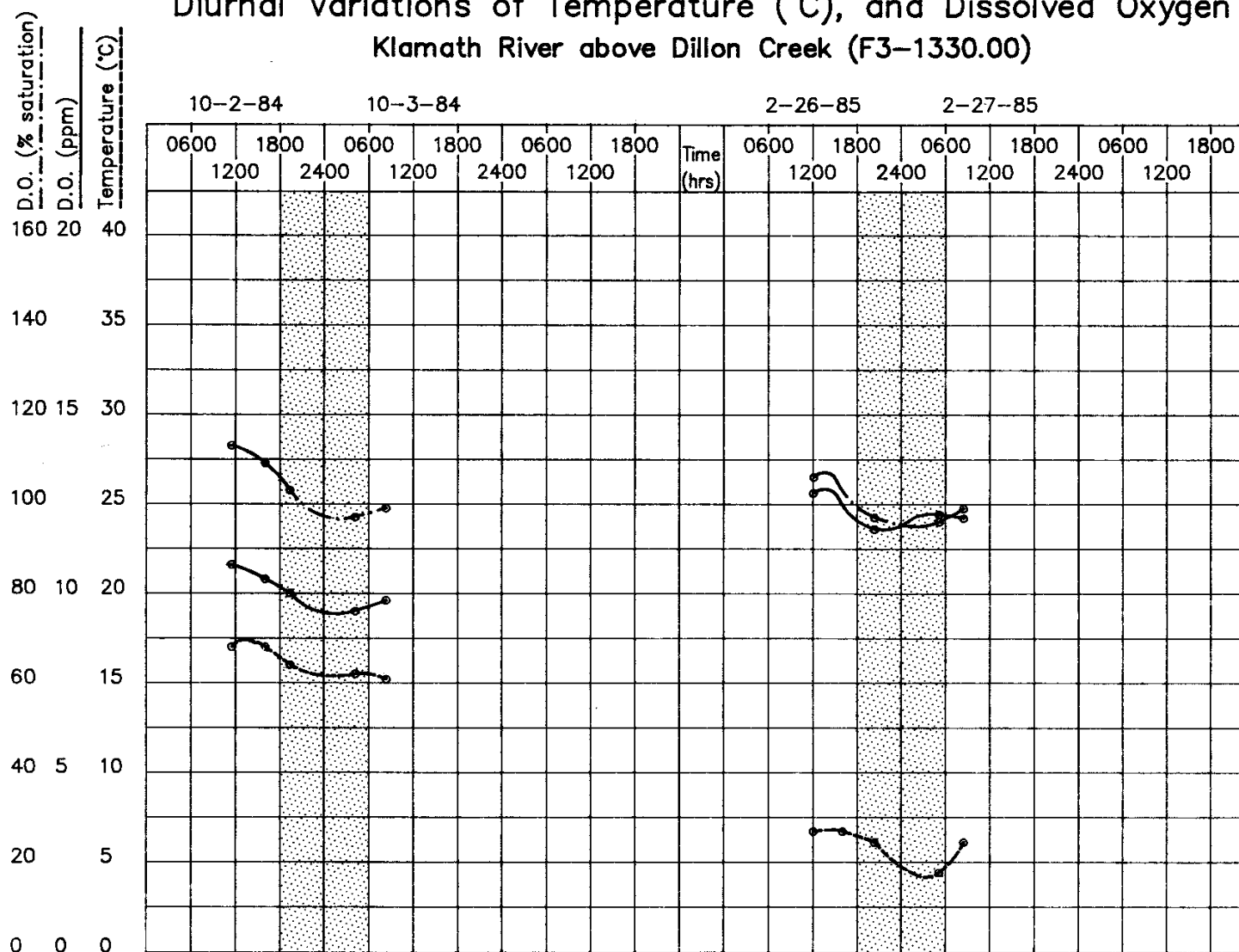


Figure 12

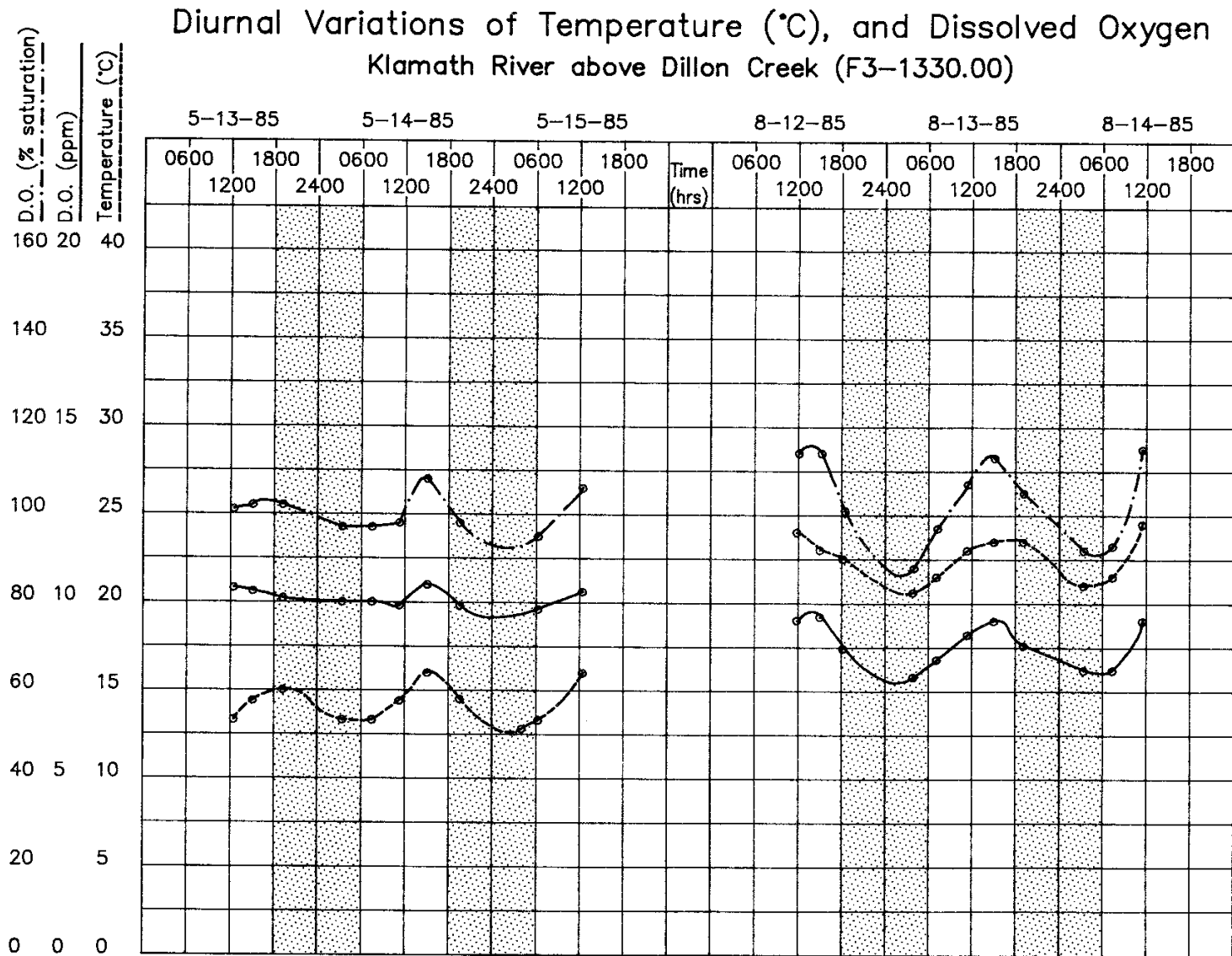


Figure 12

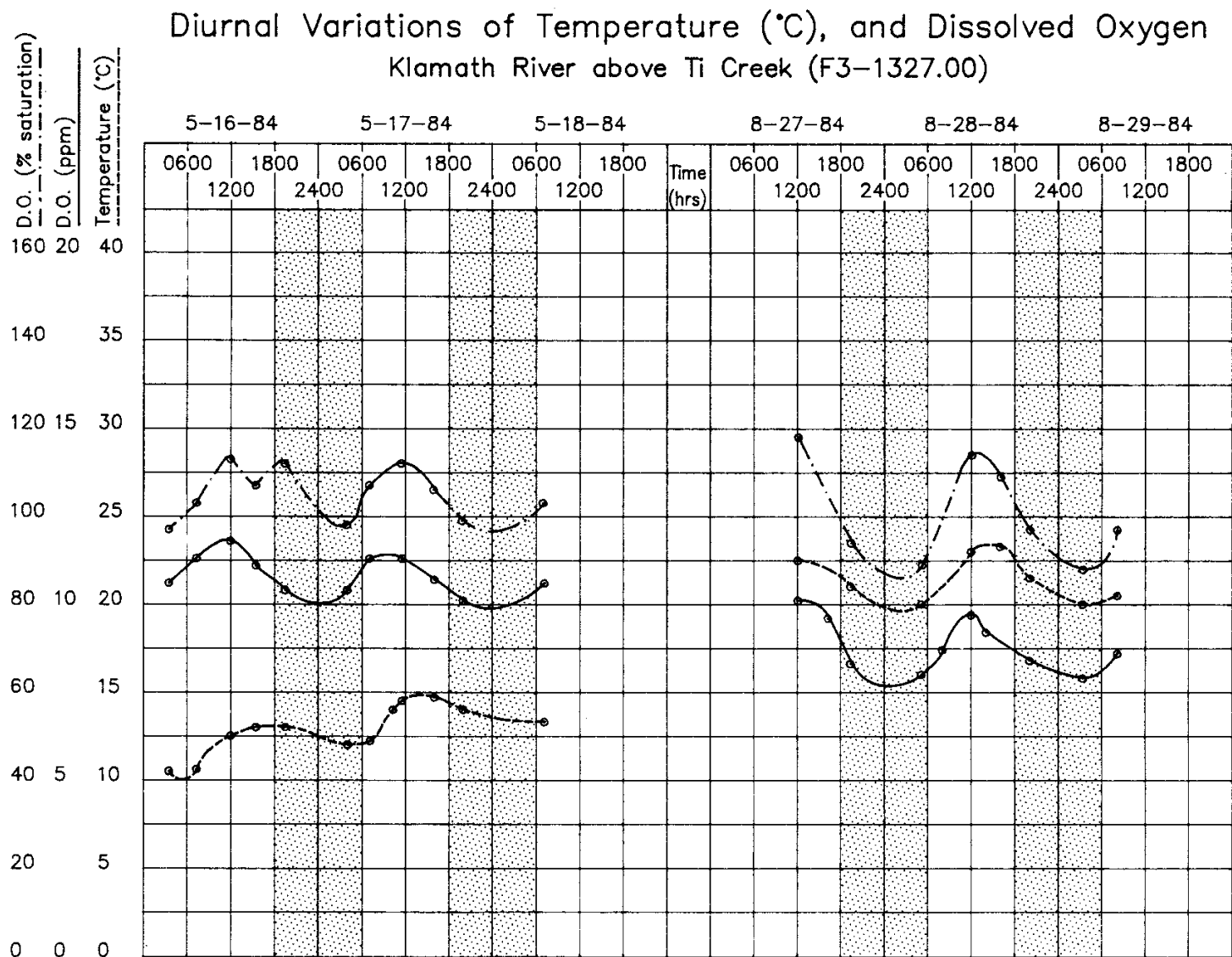


Figure 13

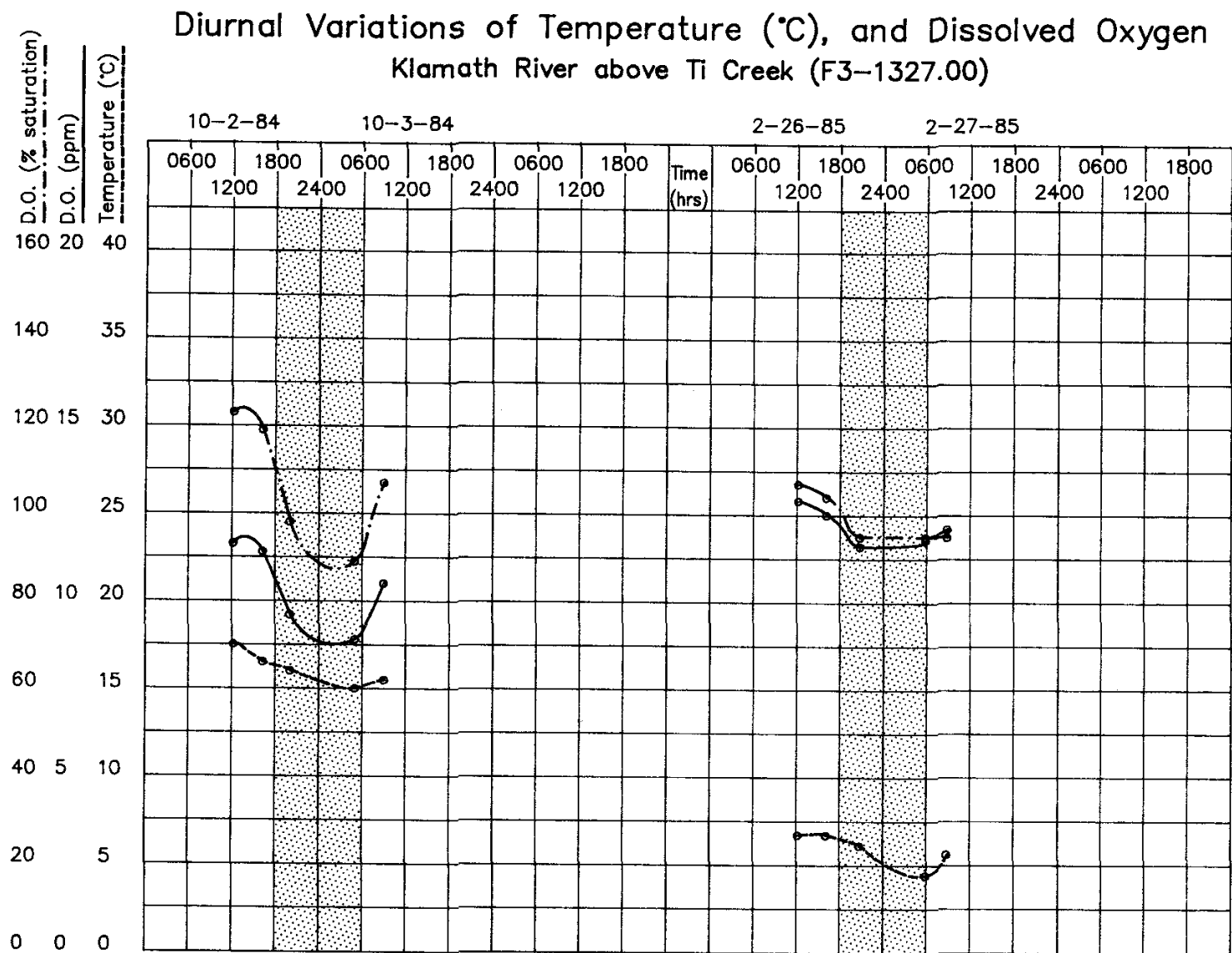


Figure 13

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River above Ti Creek (F3-1327.00)

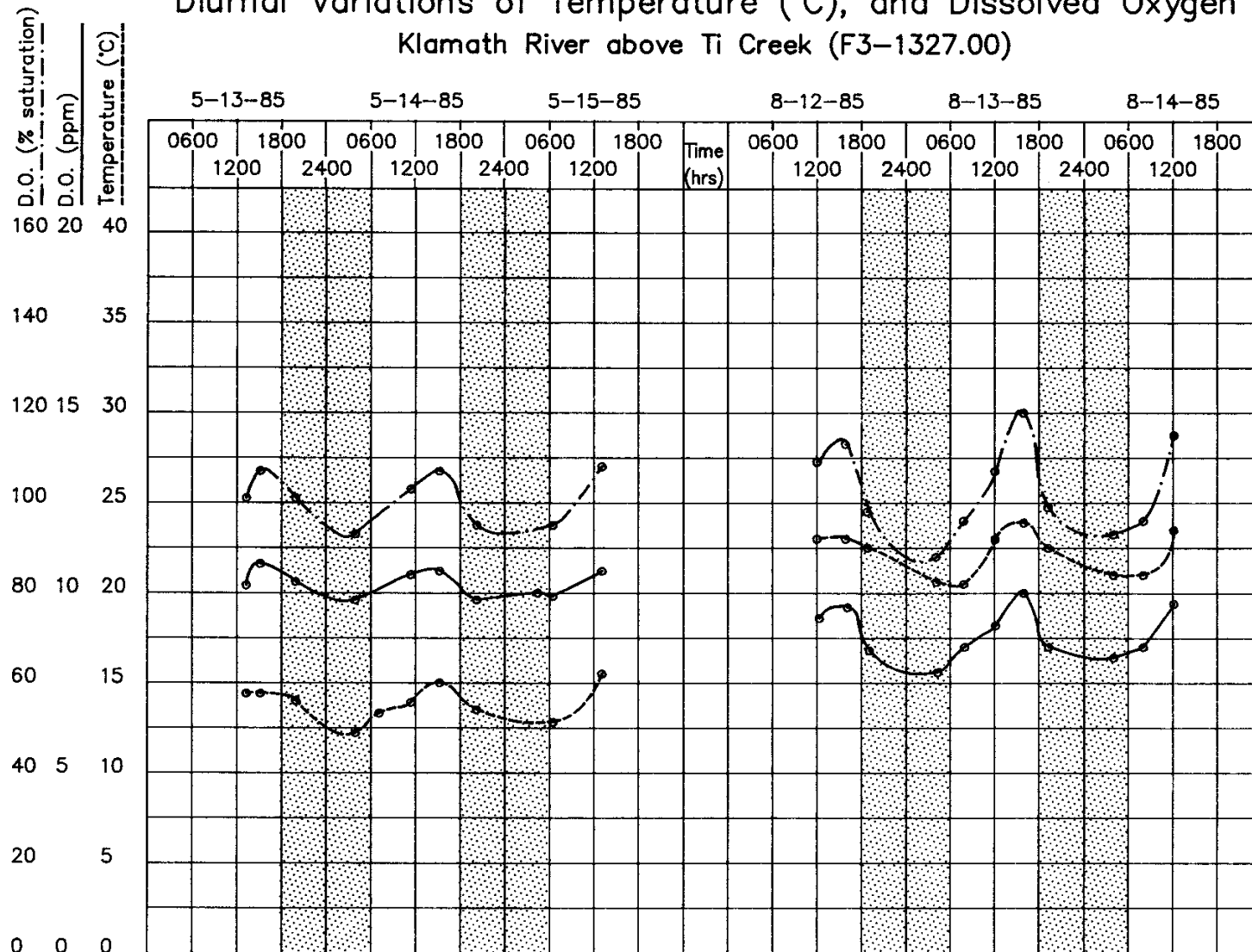


Figure 13

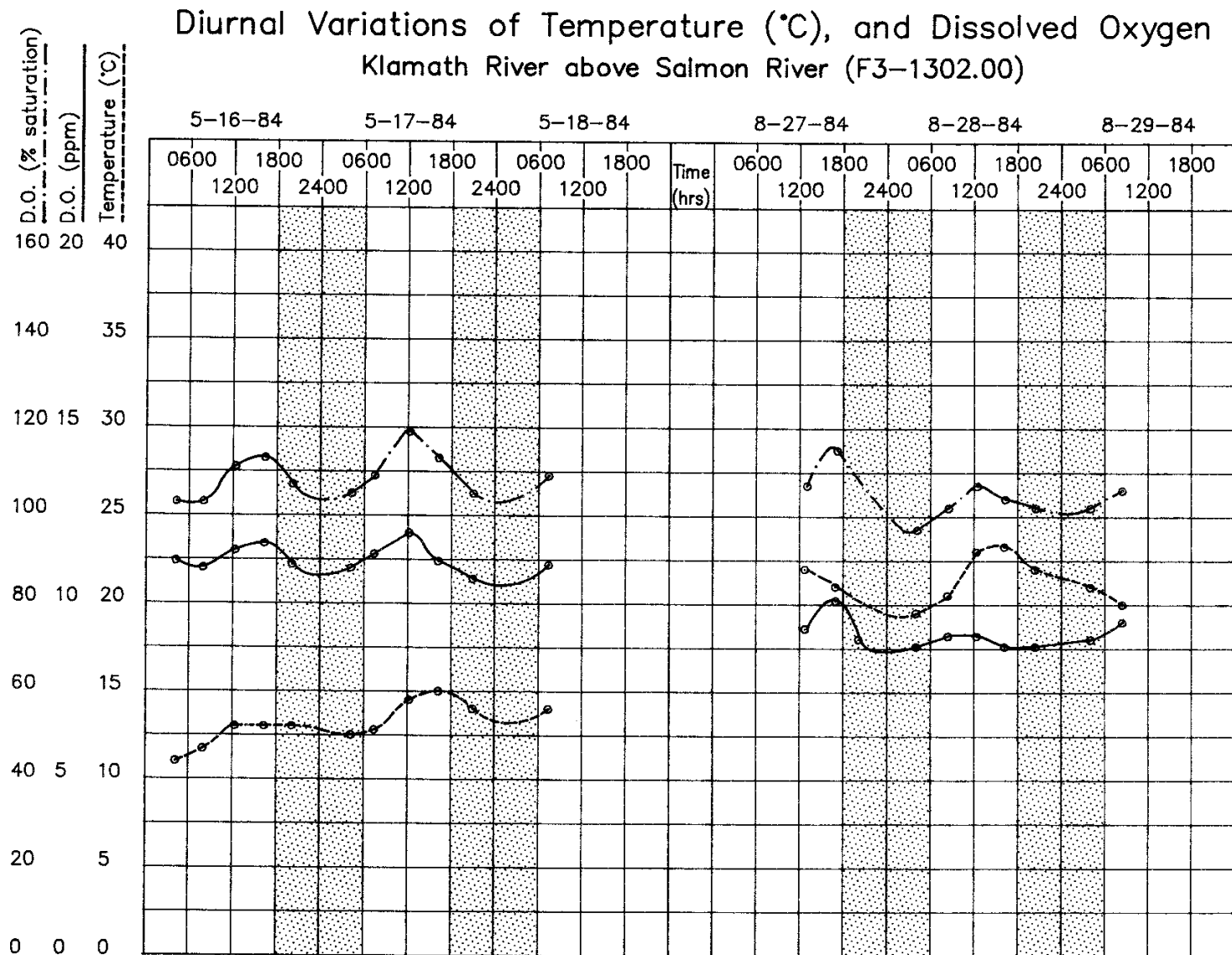


Figure 14

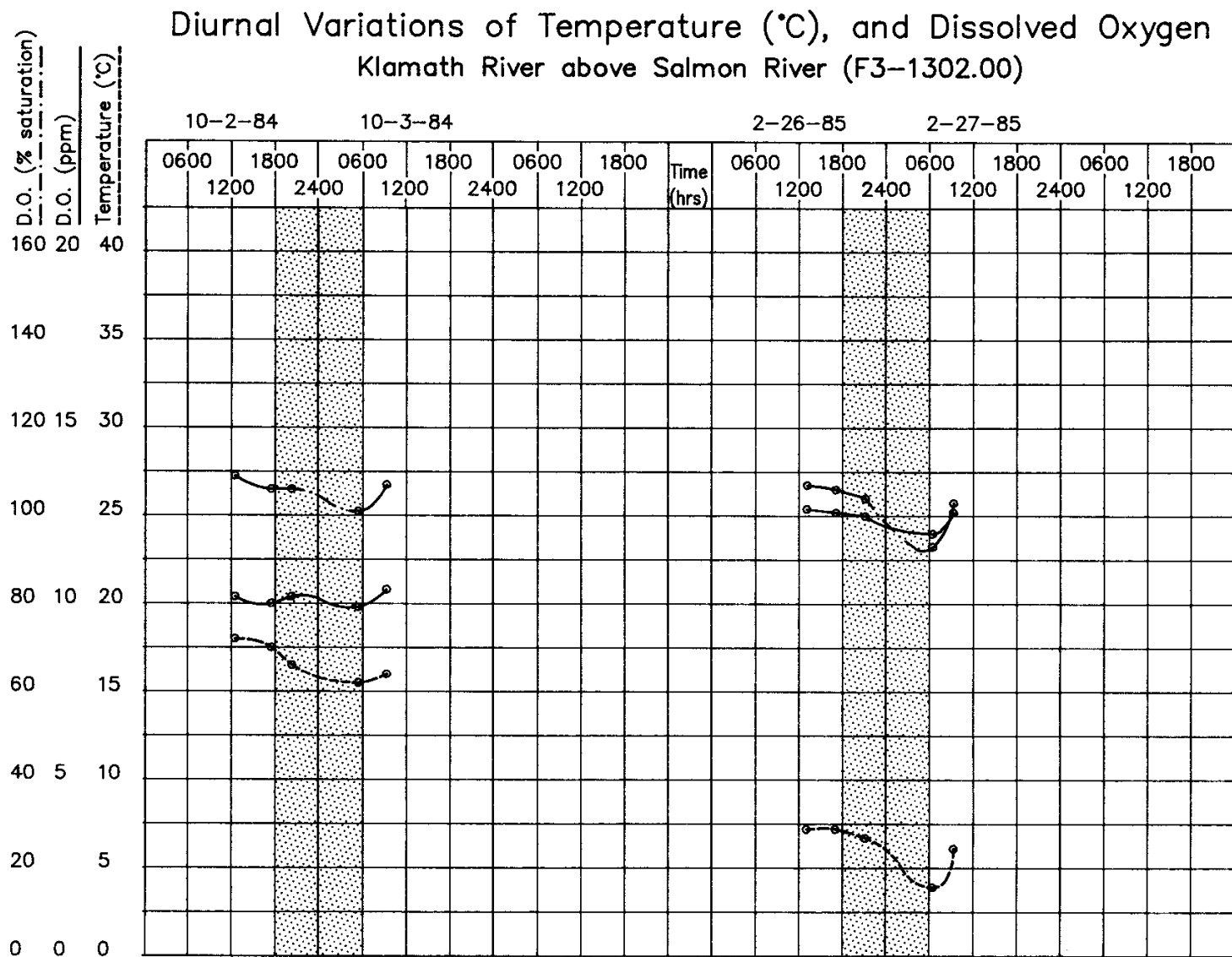


Figure 14

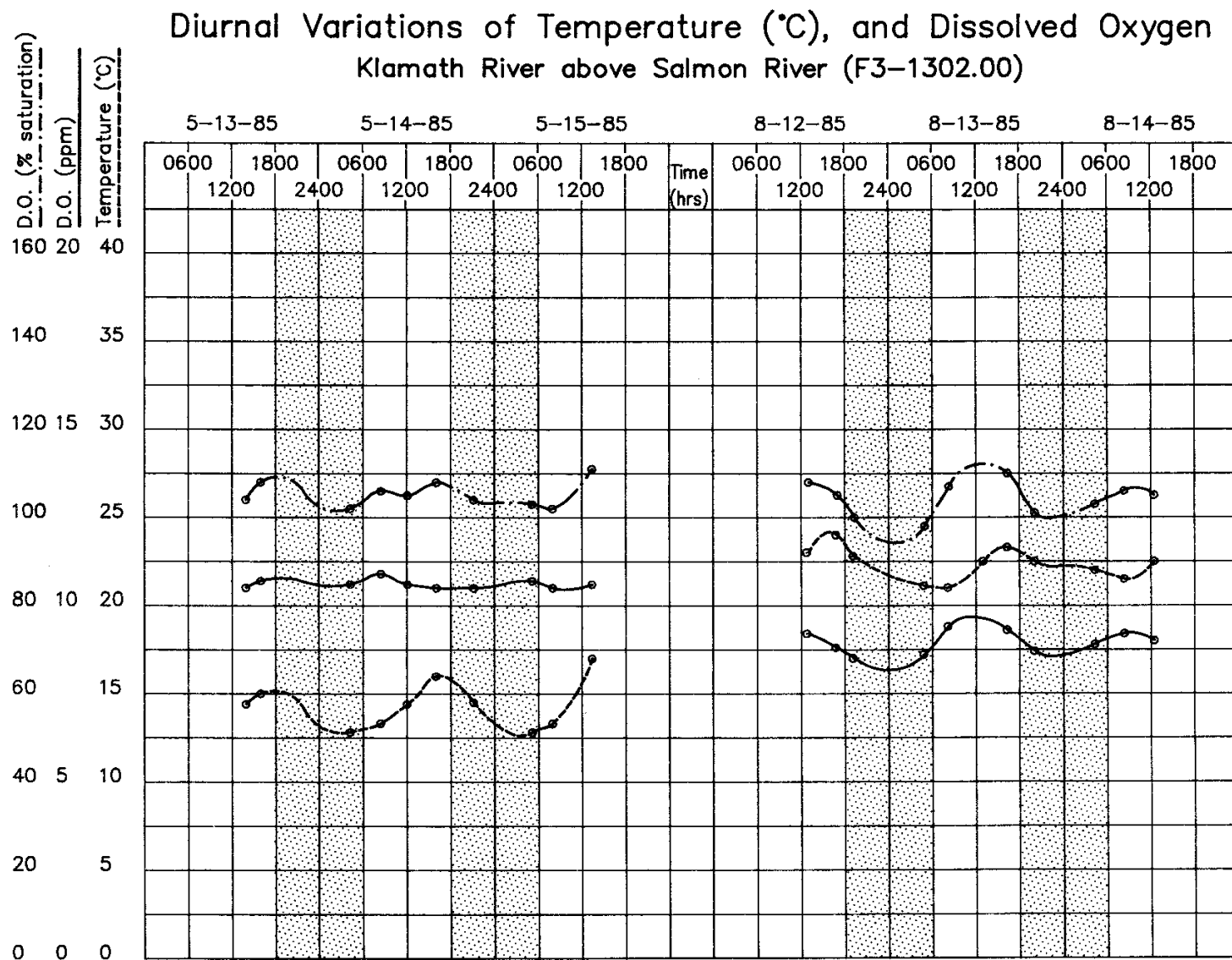


Figure 14

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Klamath River at Orleans (F3-1220.01)

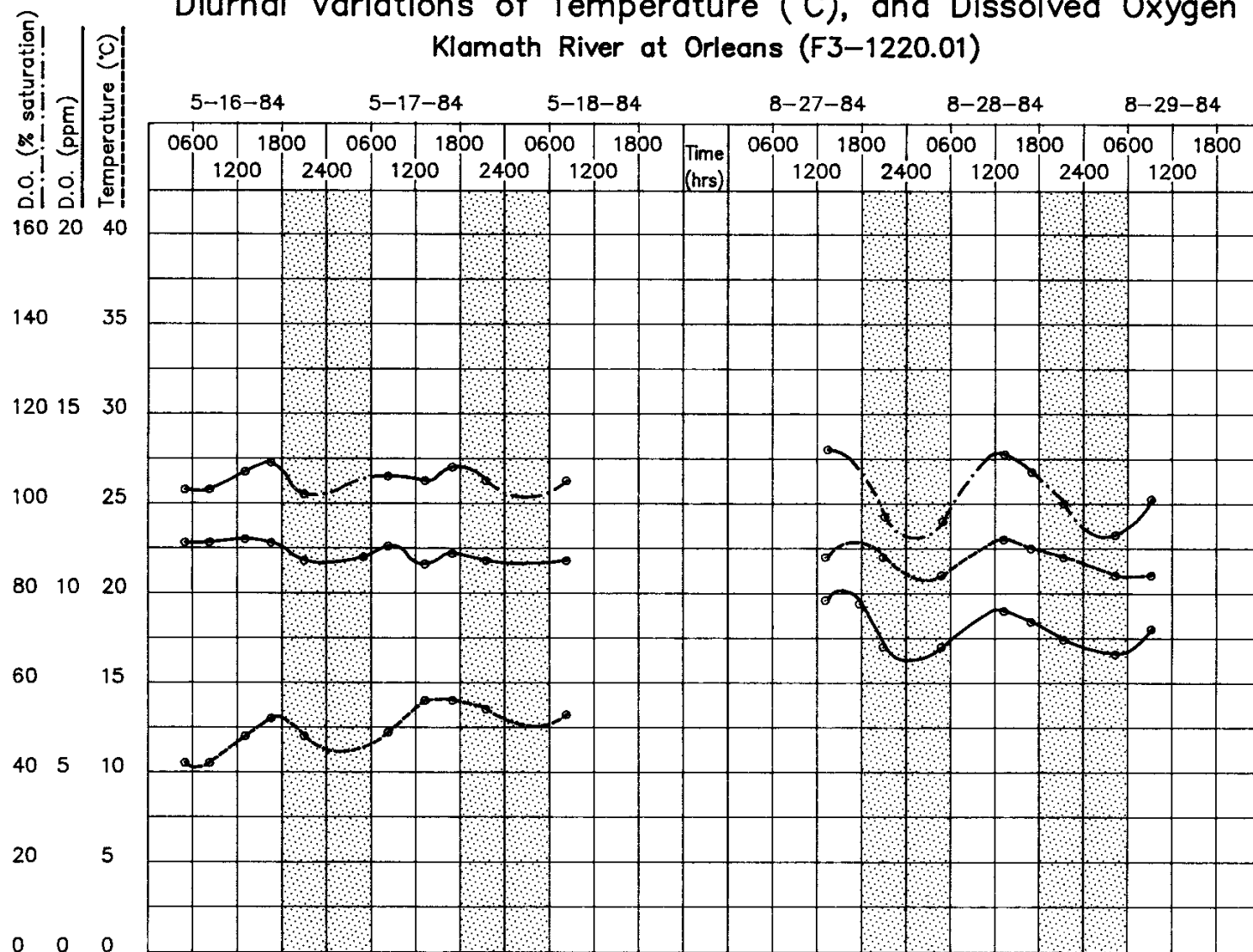


Figure 15

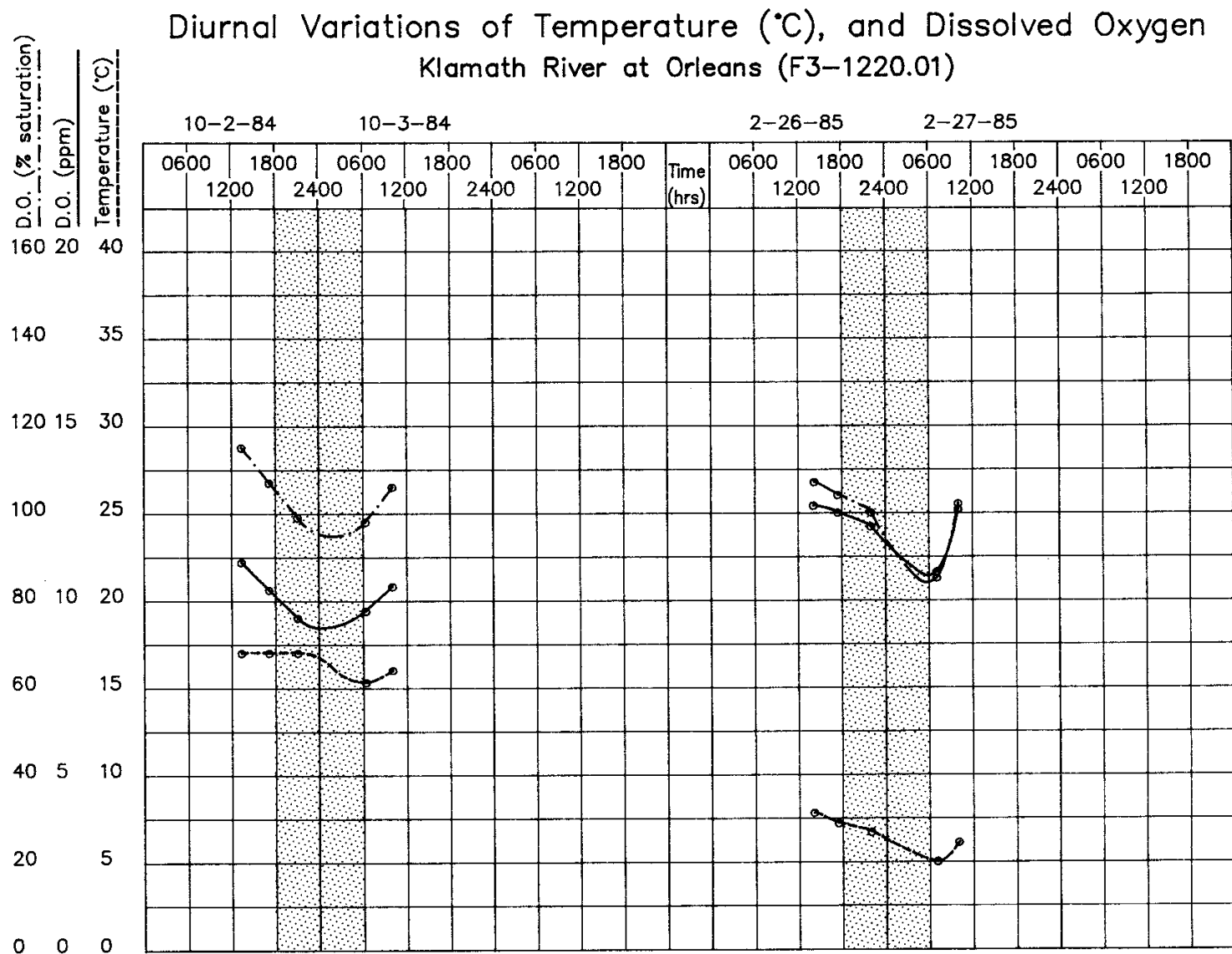


Figure 15

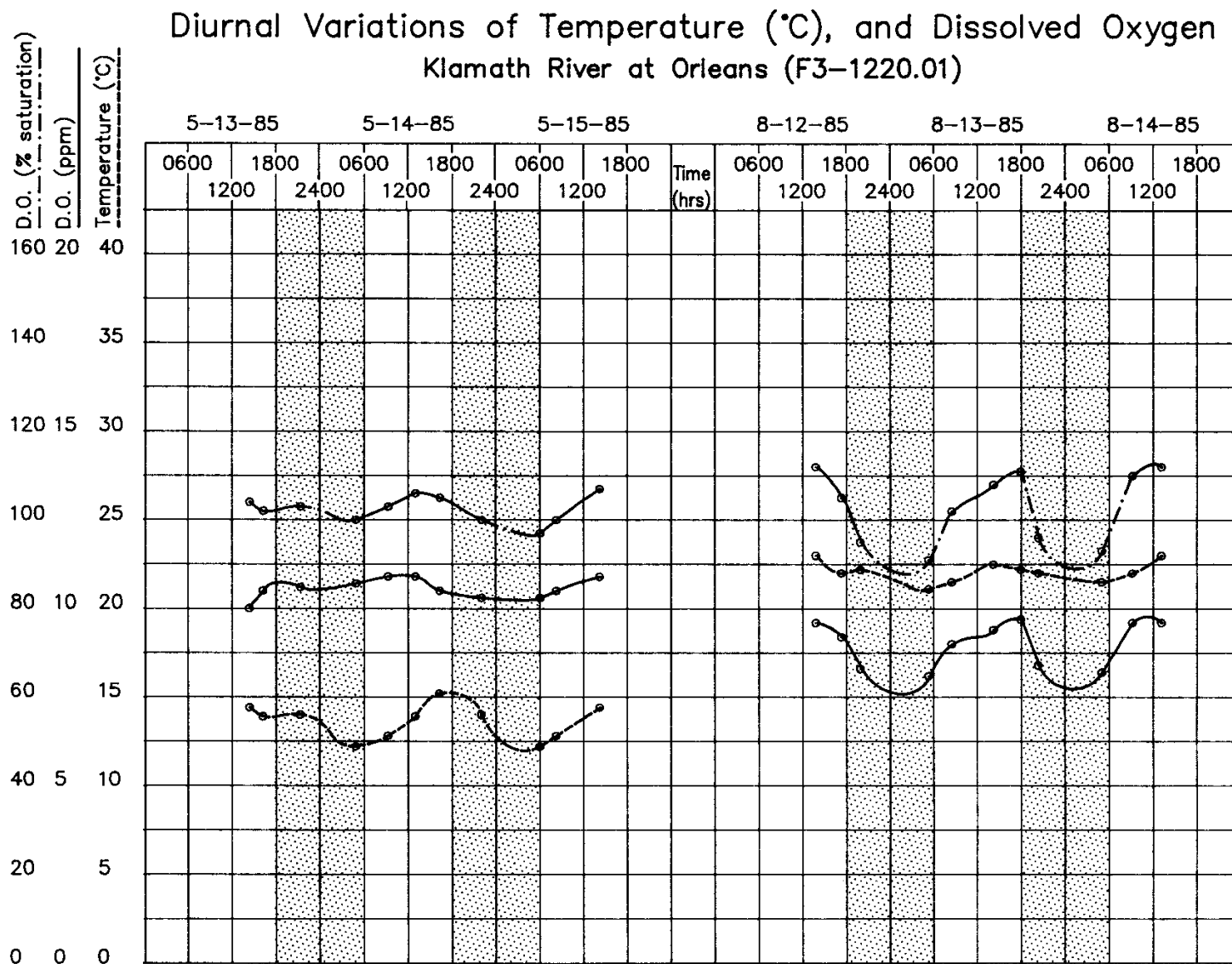


Figure 15

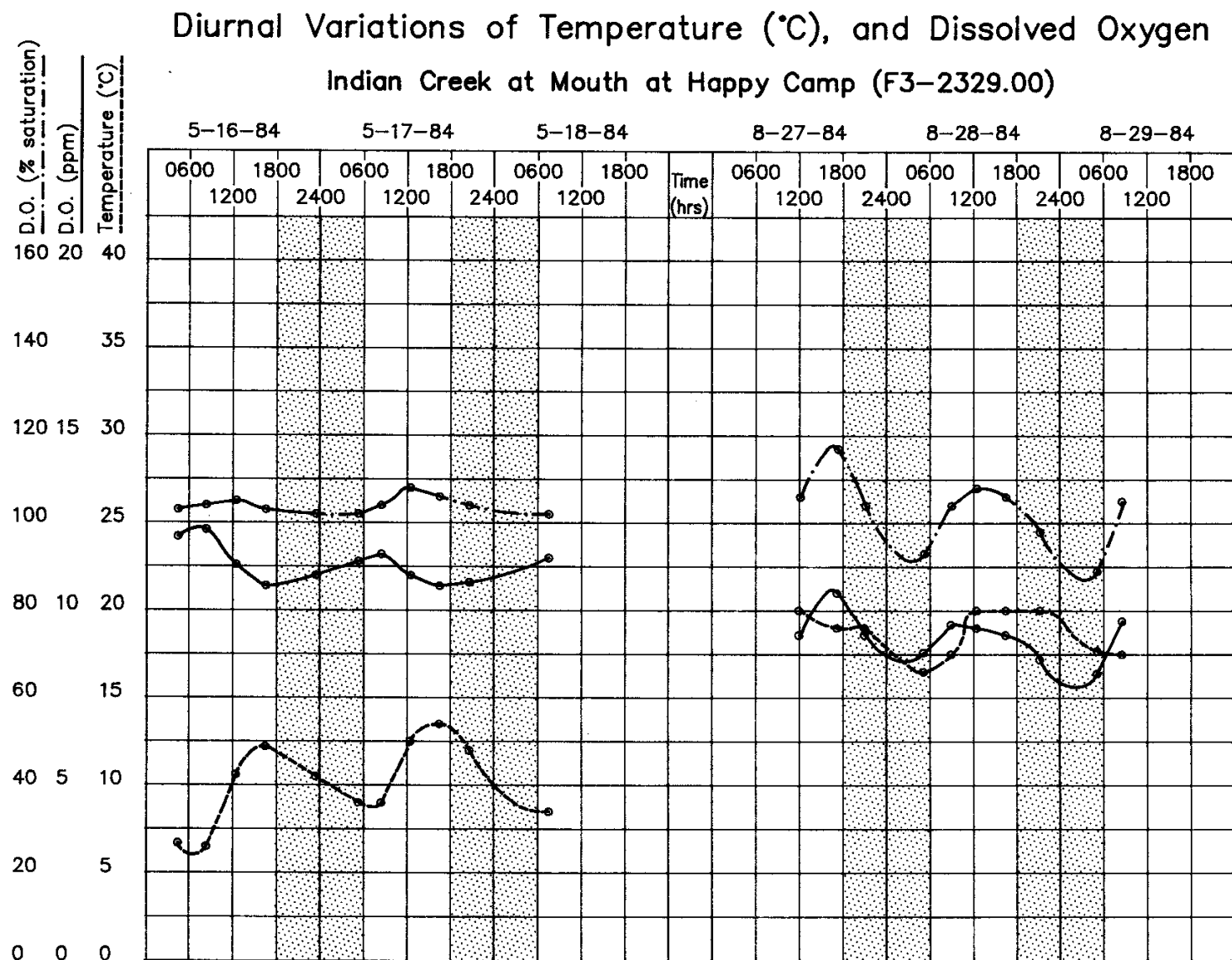


Figure 16

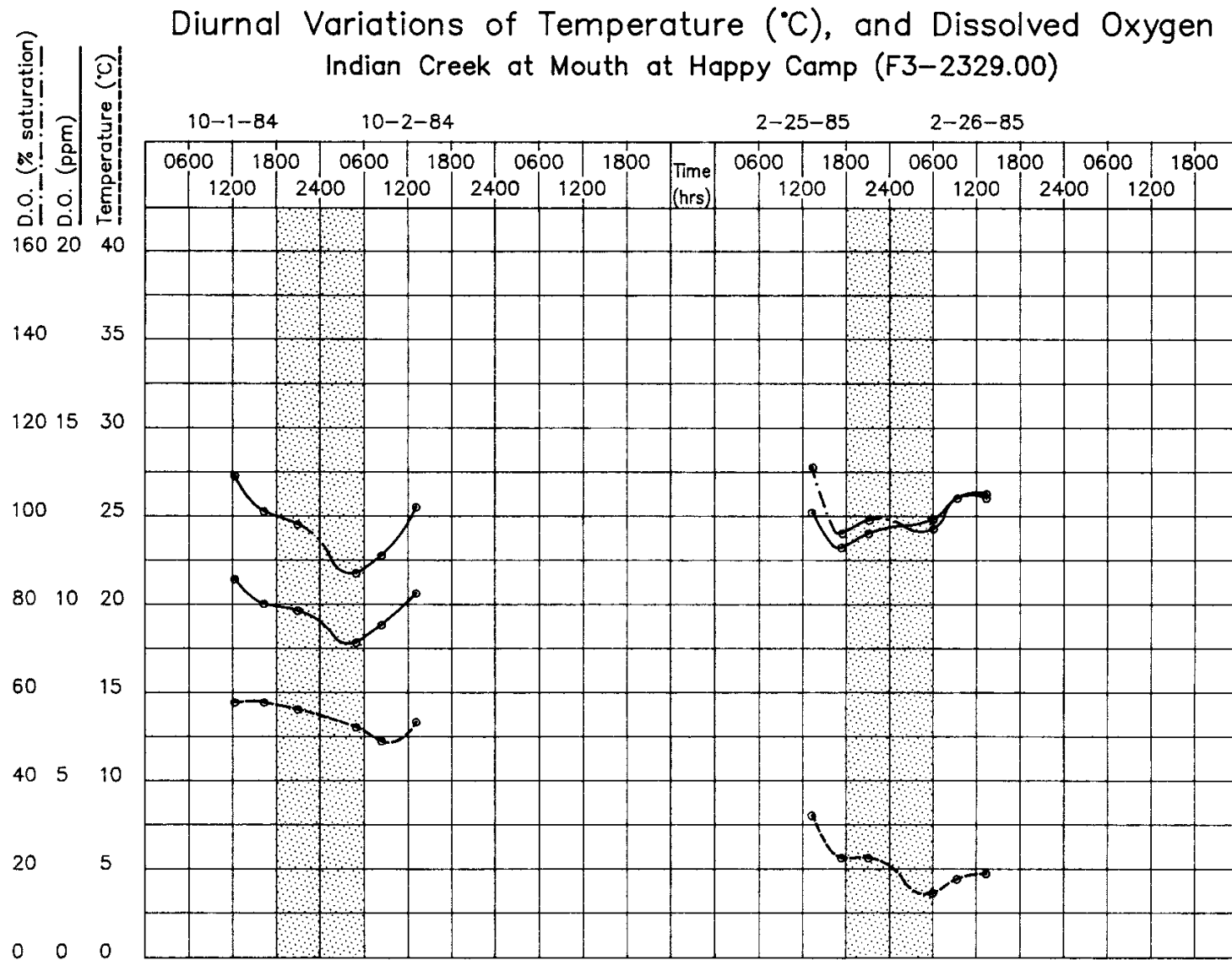


Figure 16

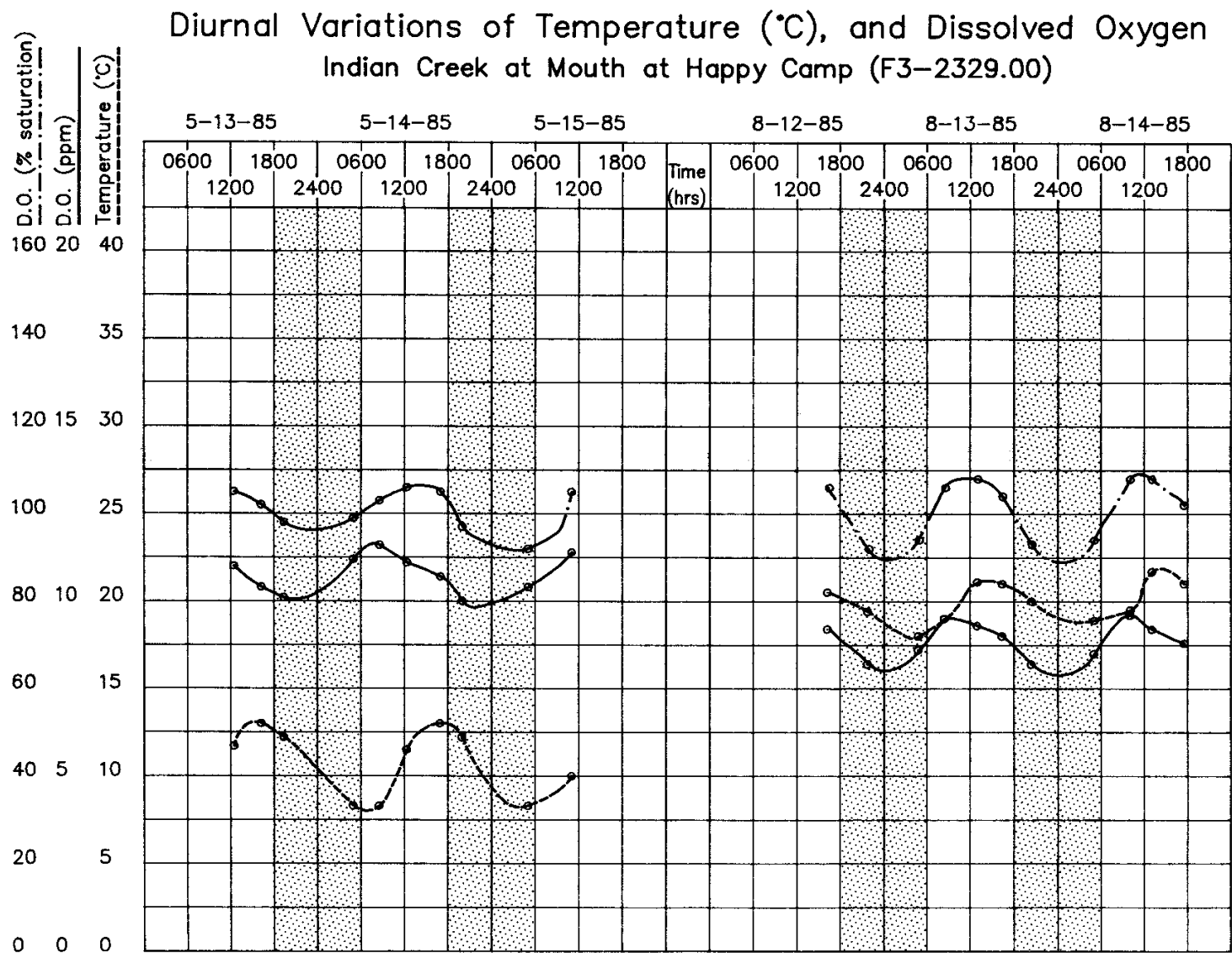


Figure 16

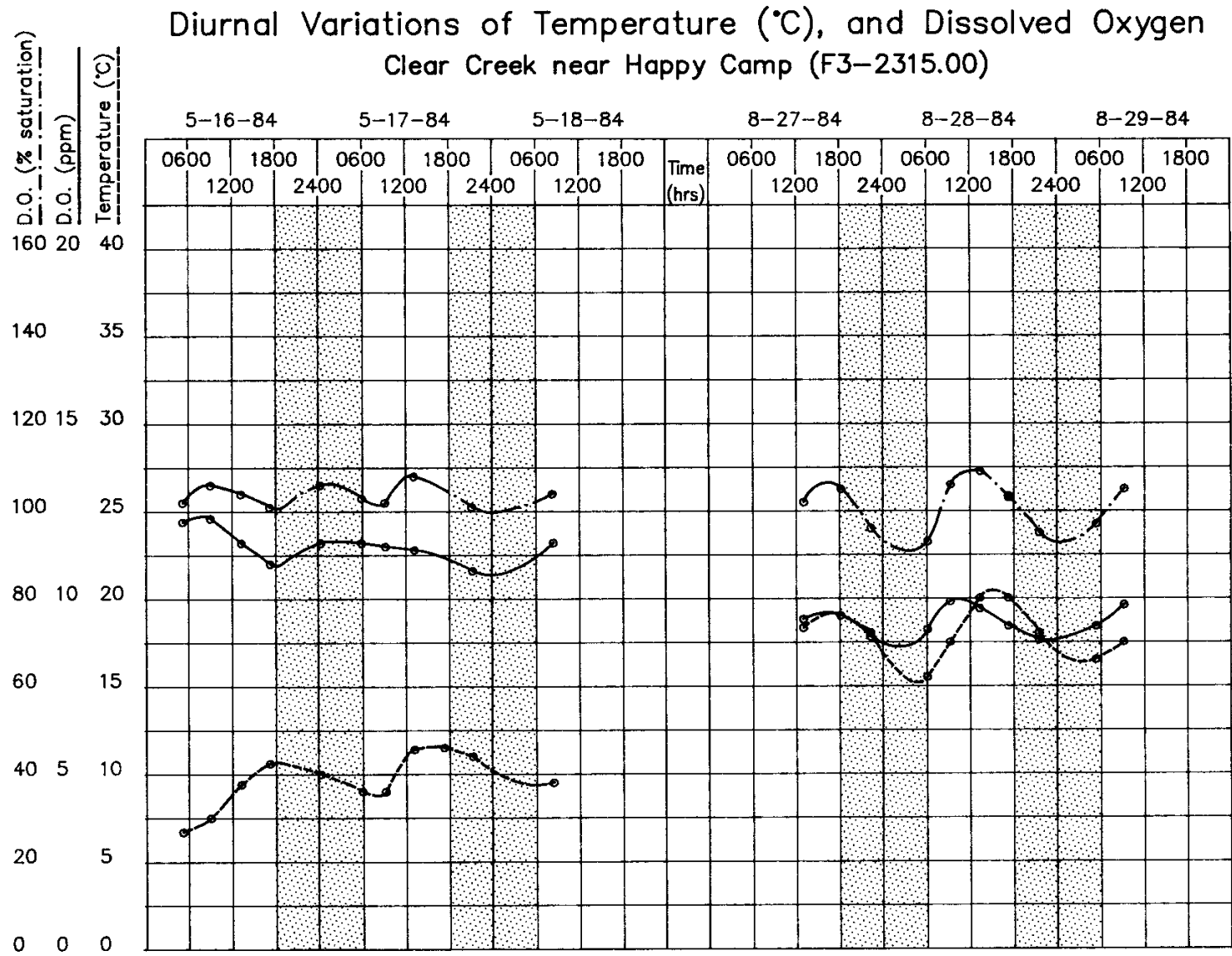


Figure 17

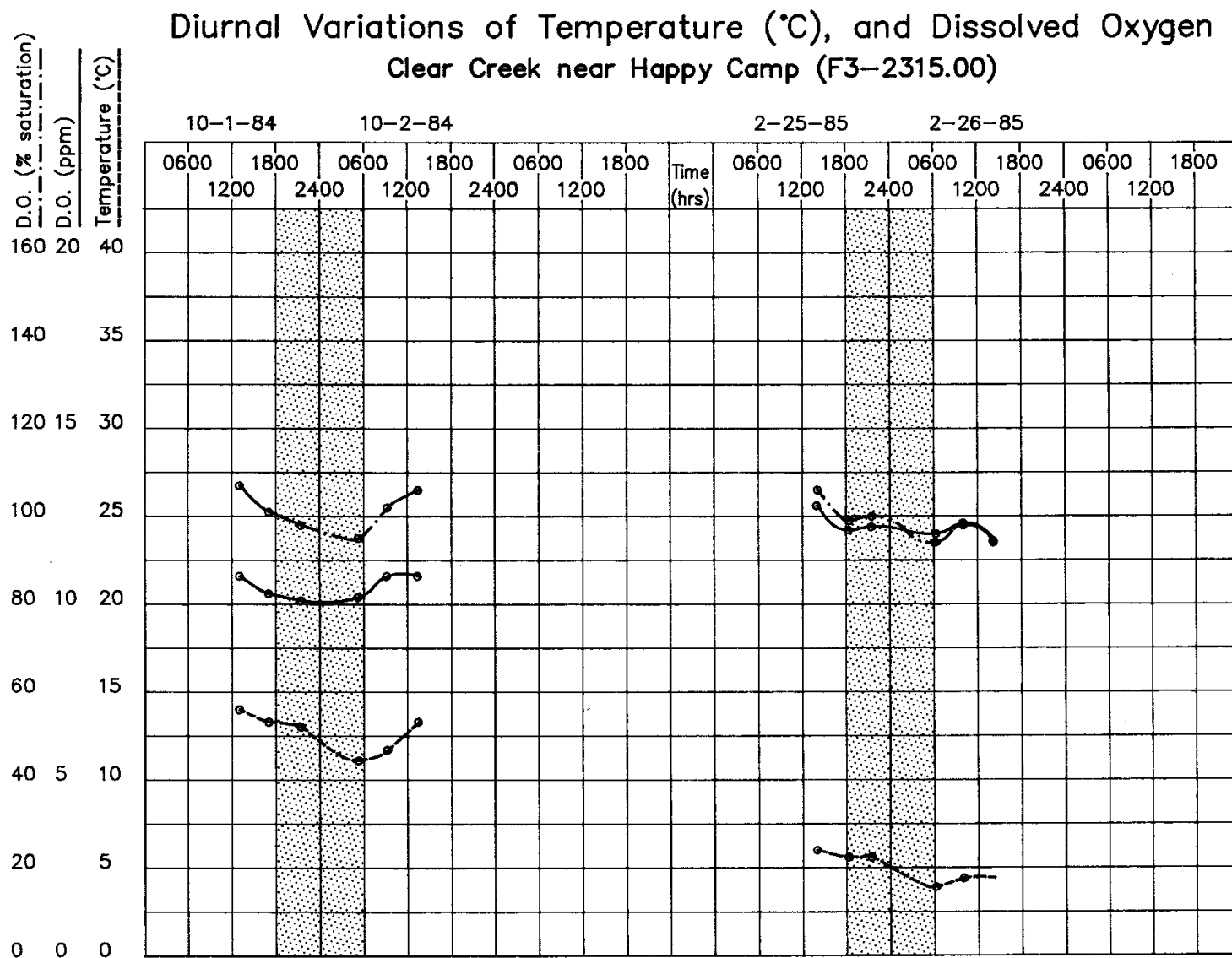


Figure 17

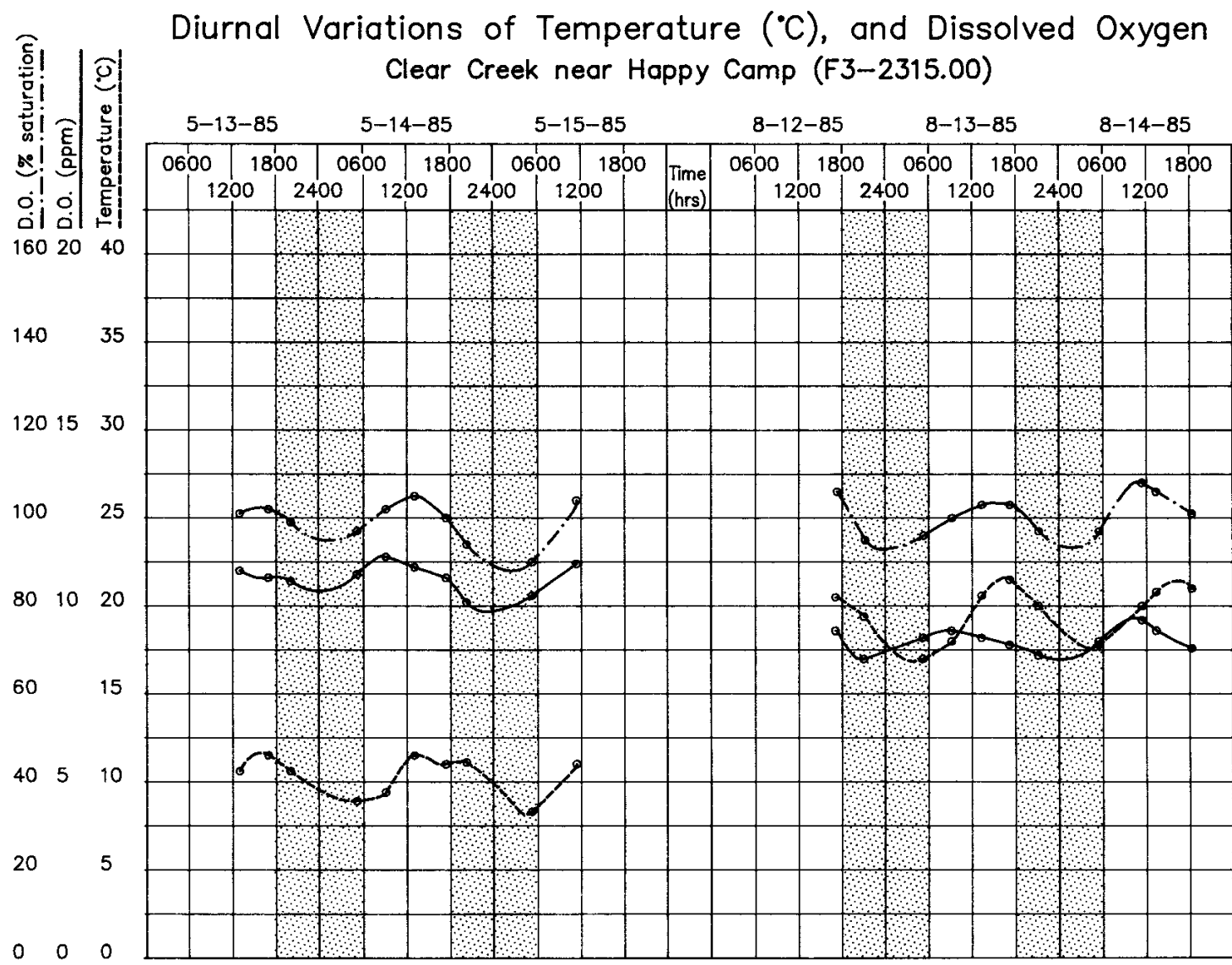


Figure 17

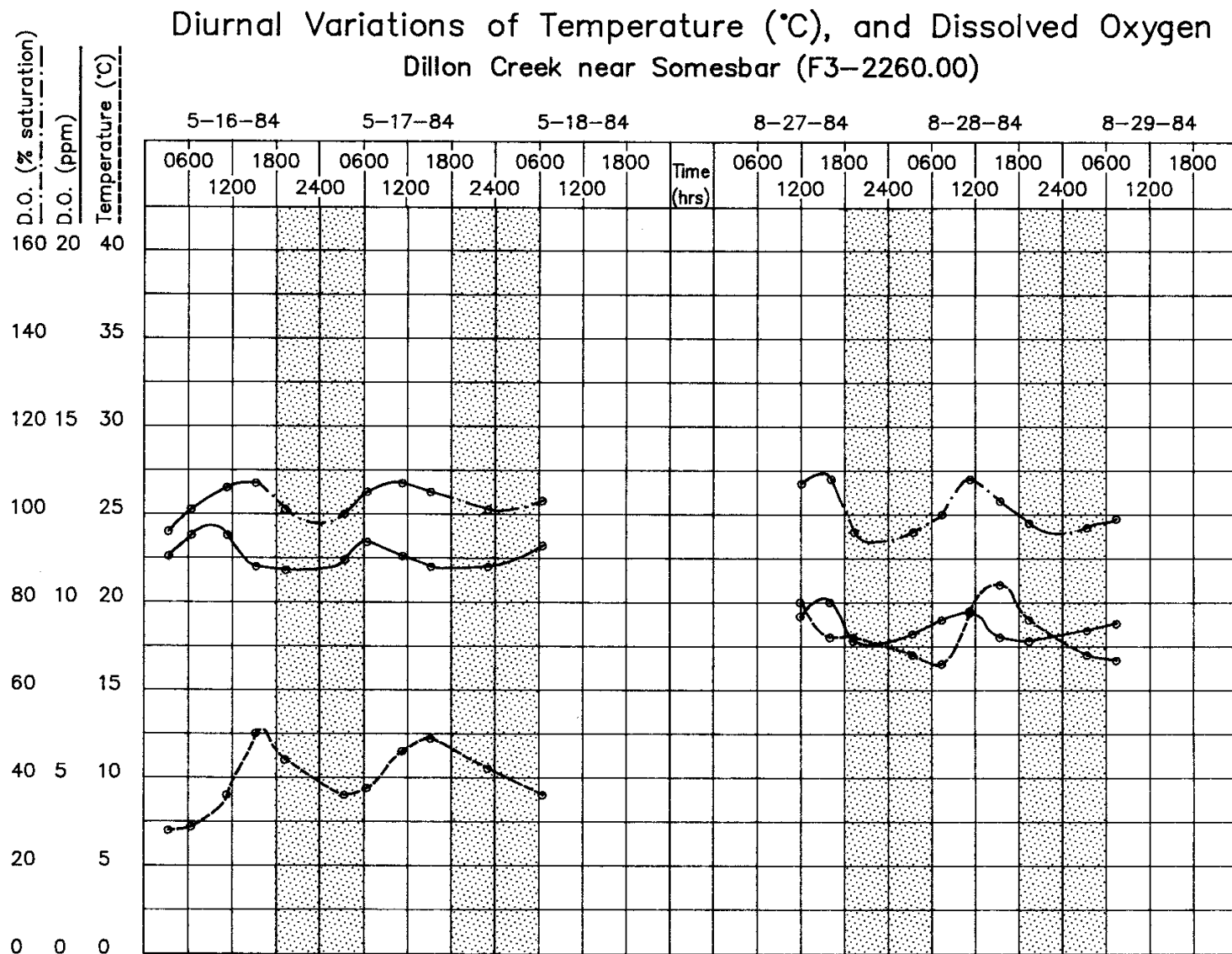


Figure 18

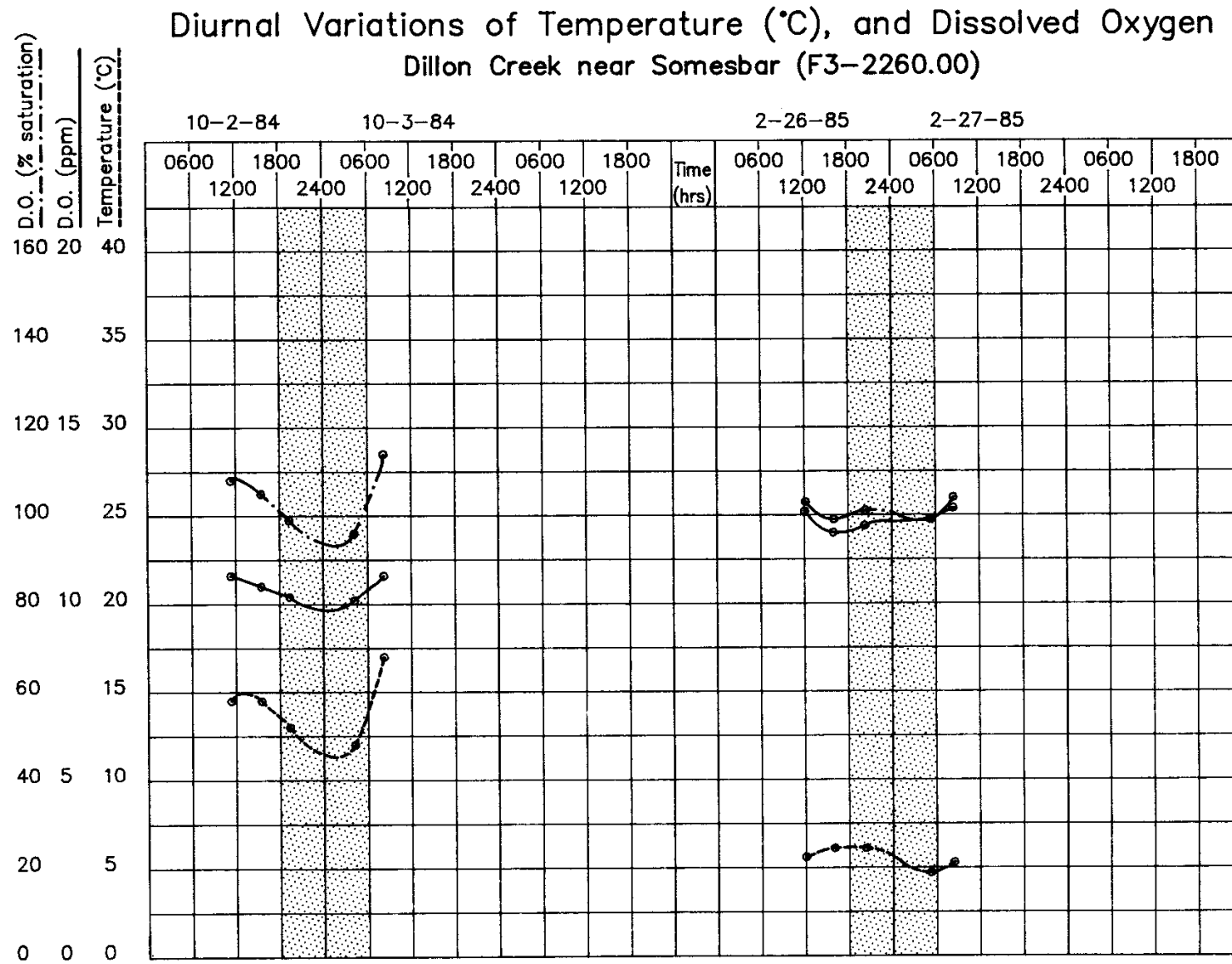


Figure 18

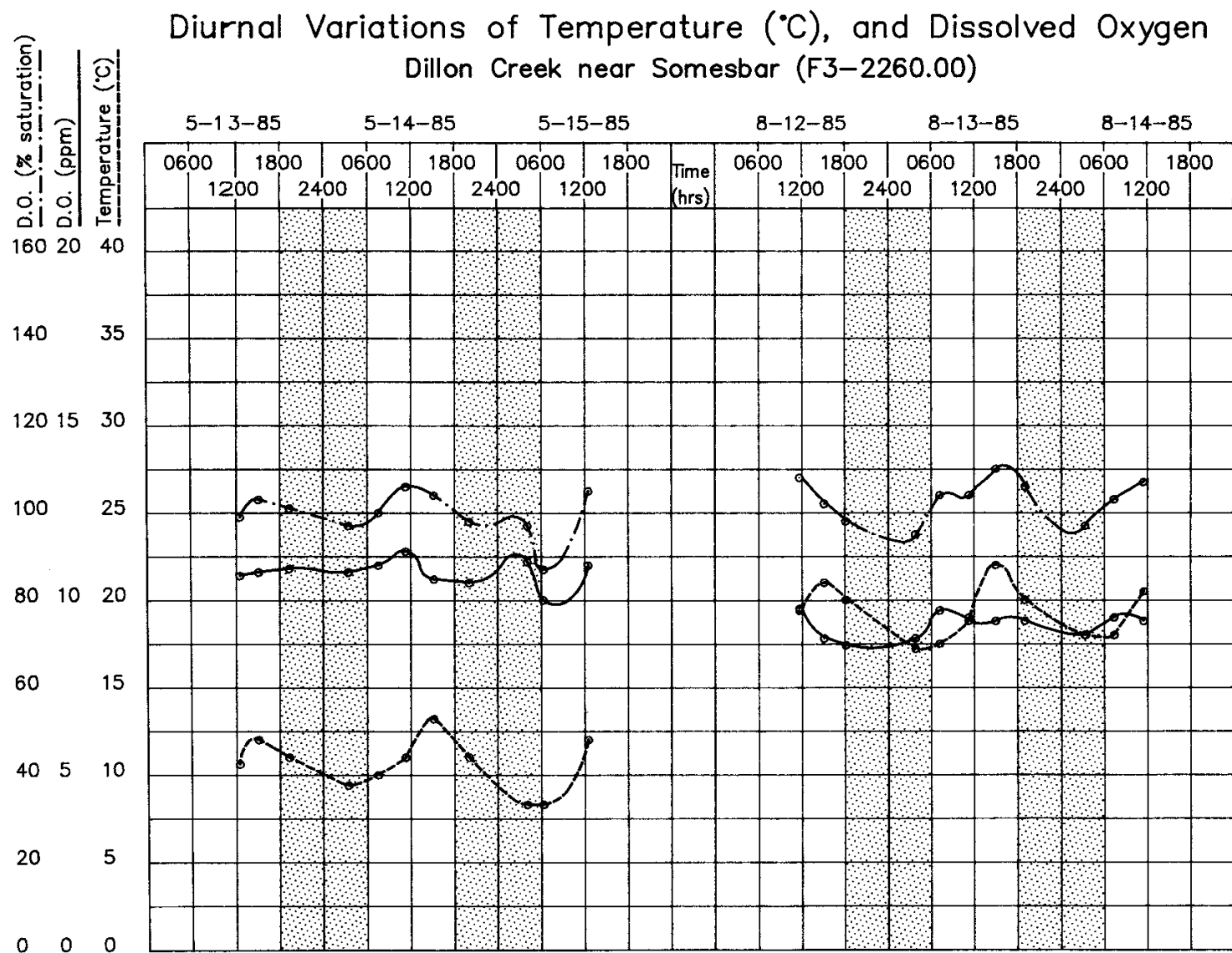


Figure 18

Diurnal Variations of Temperature (°C), and Dissolved Oxygen Salmon River at Somesbar (F3-4100.00)

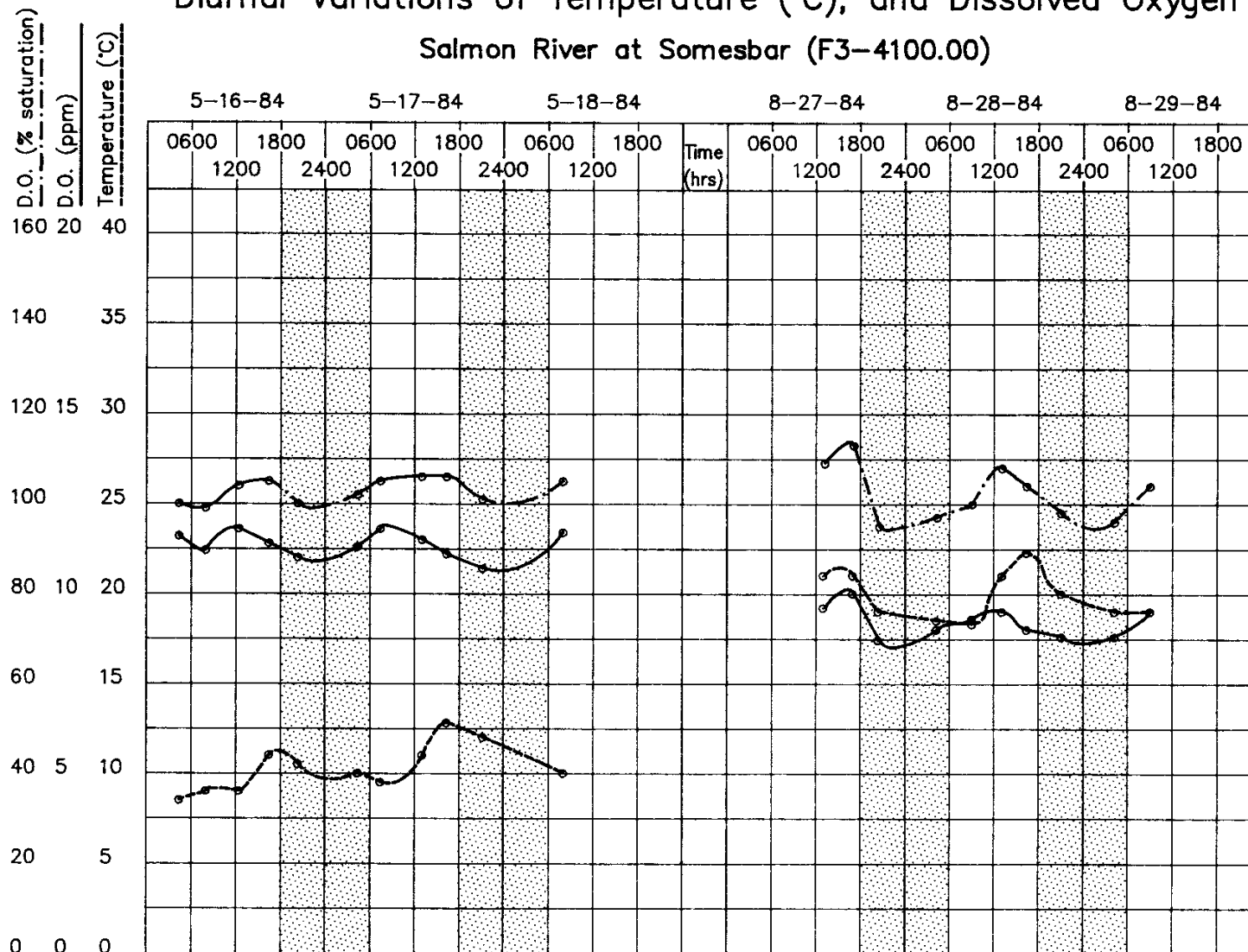


Figure 19

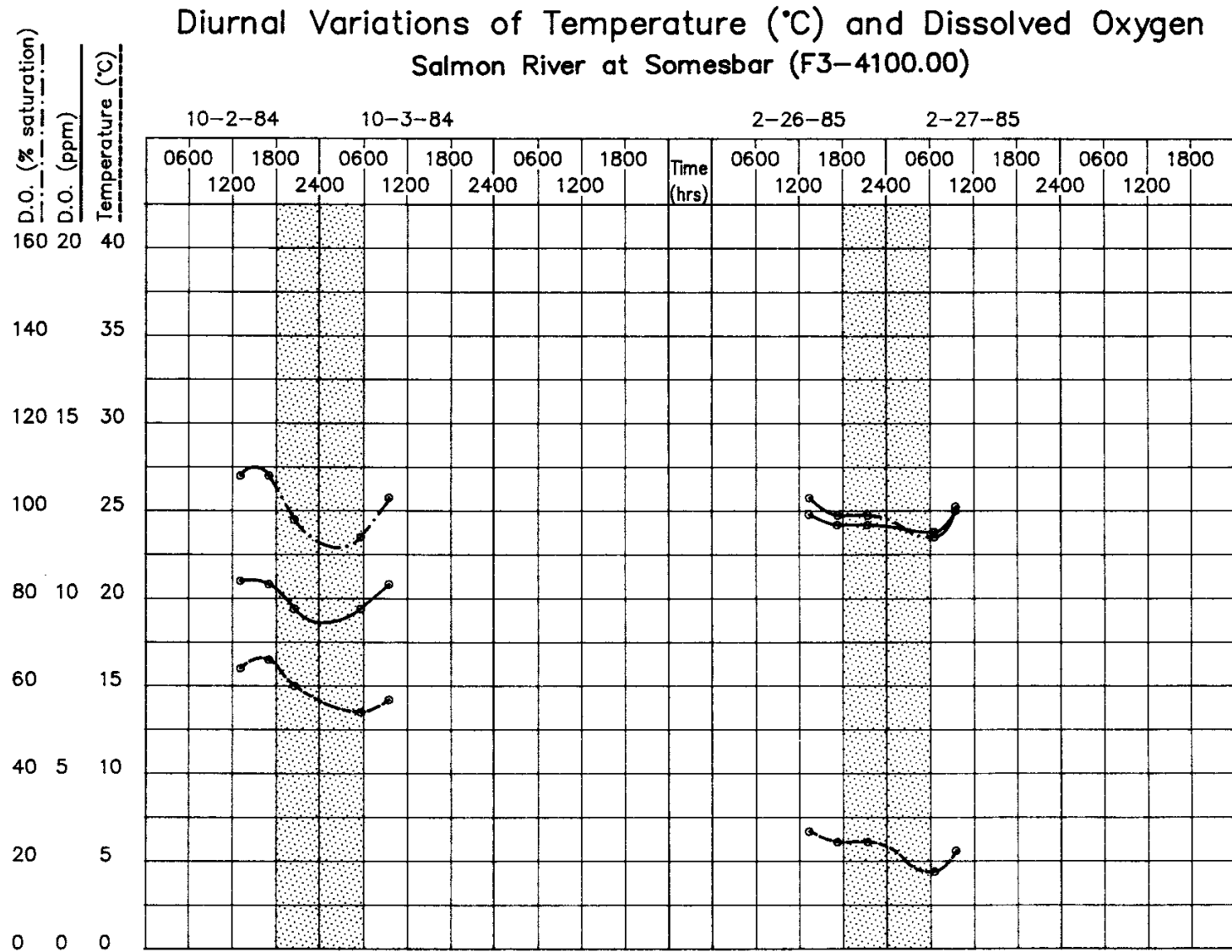


Figure 19

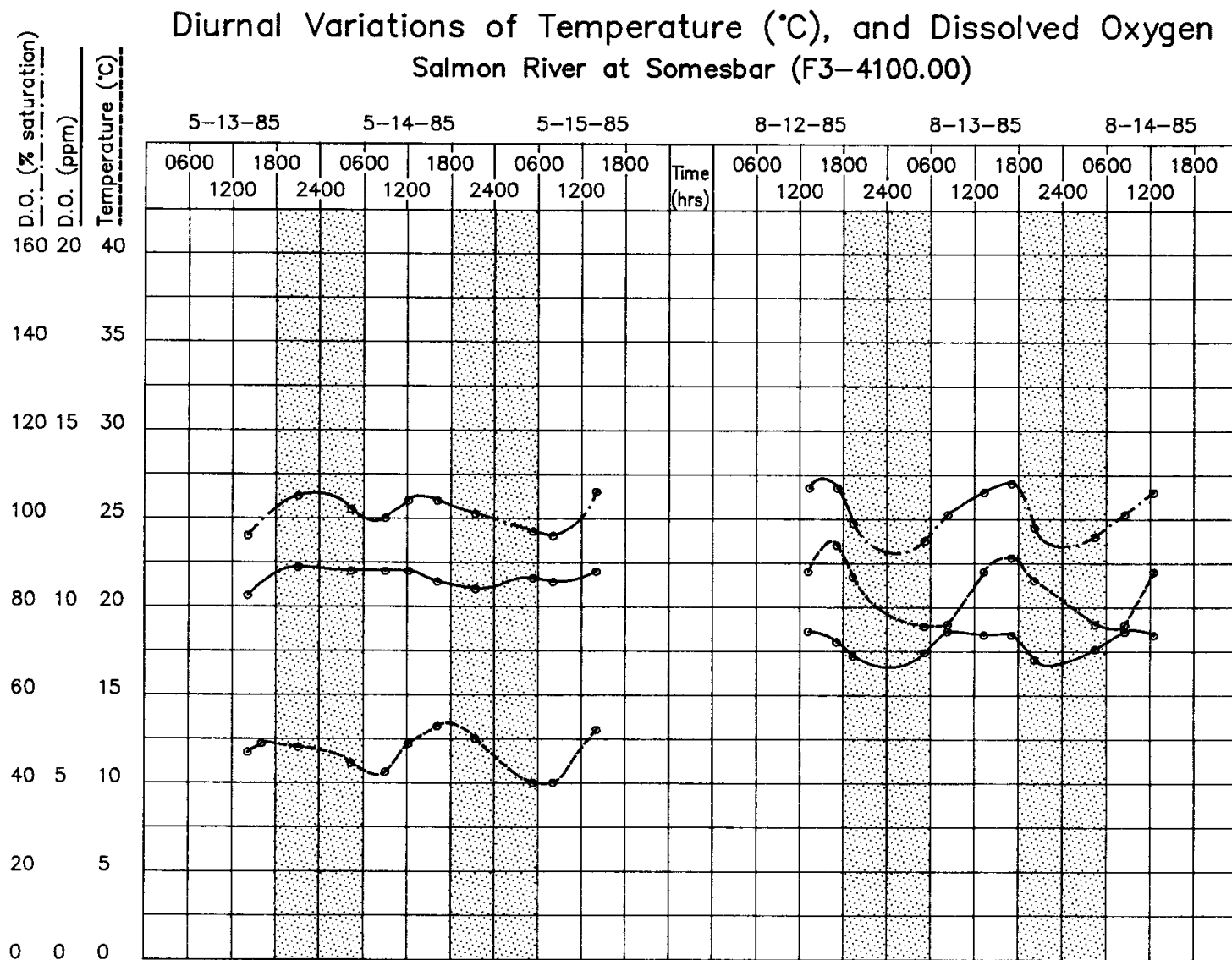
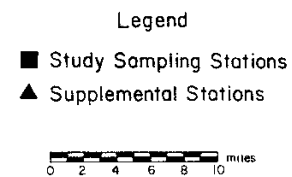
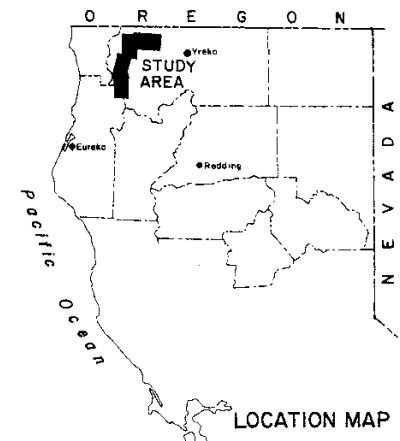
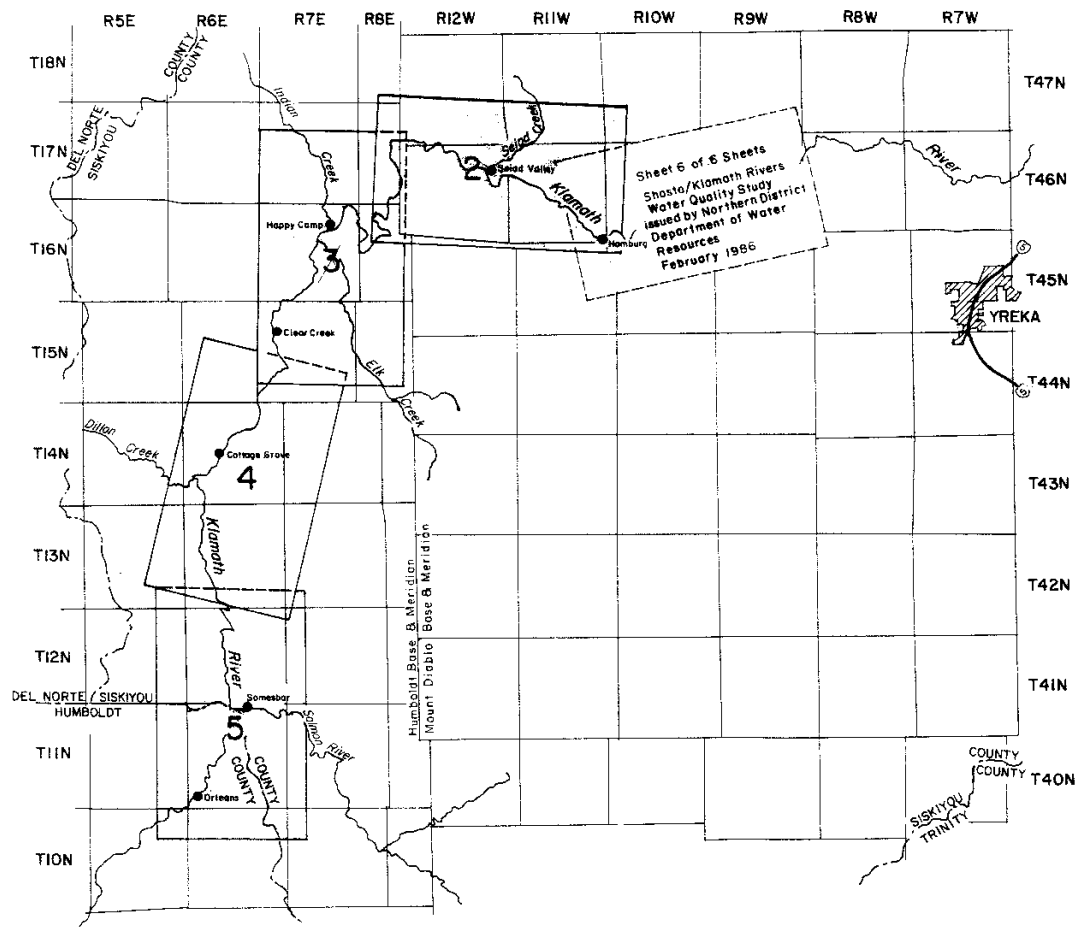
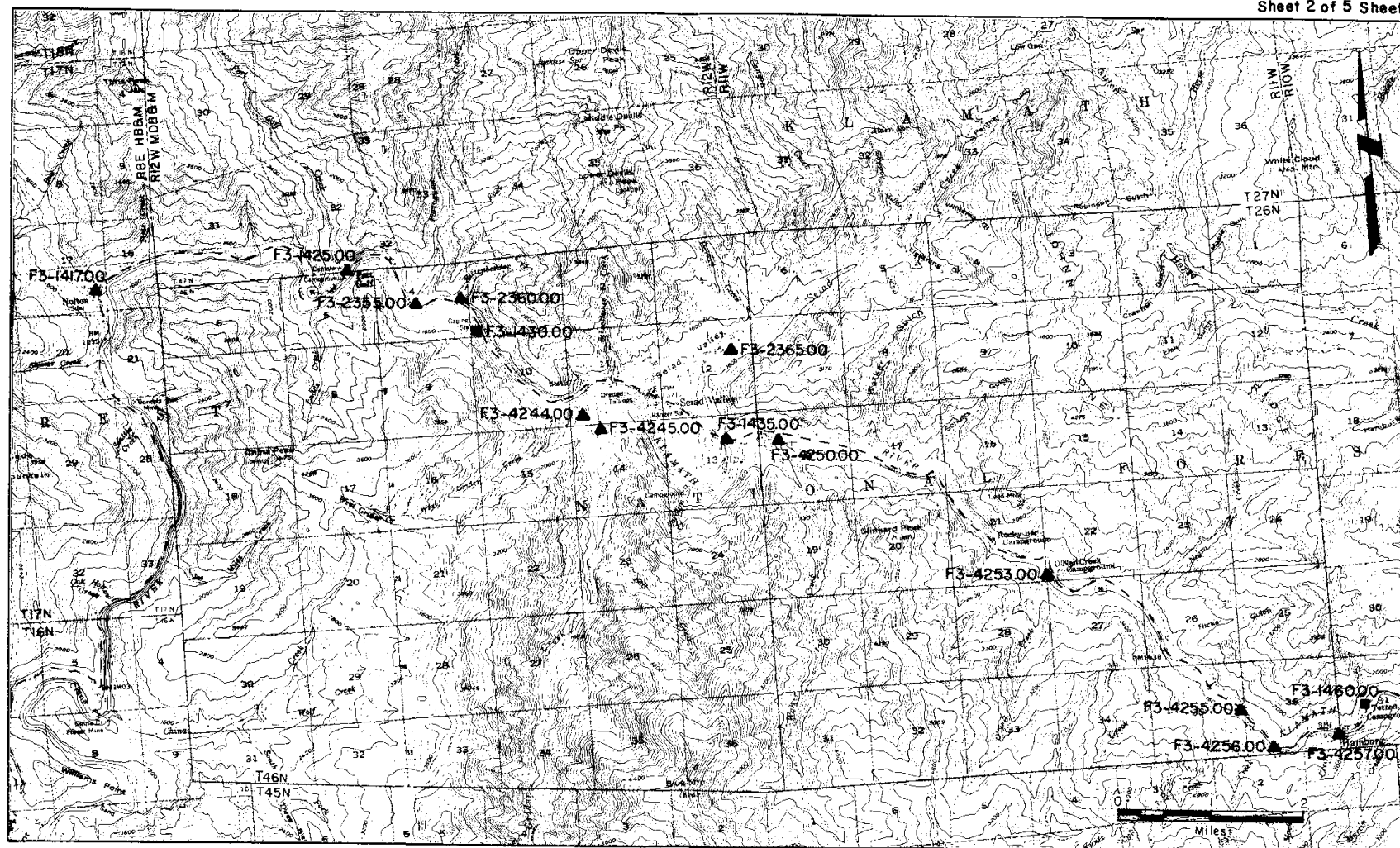


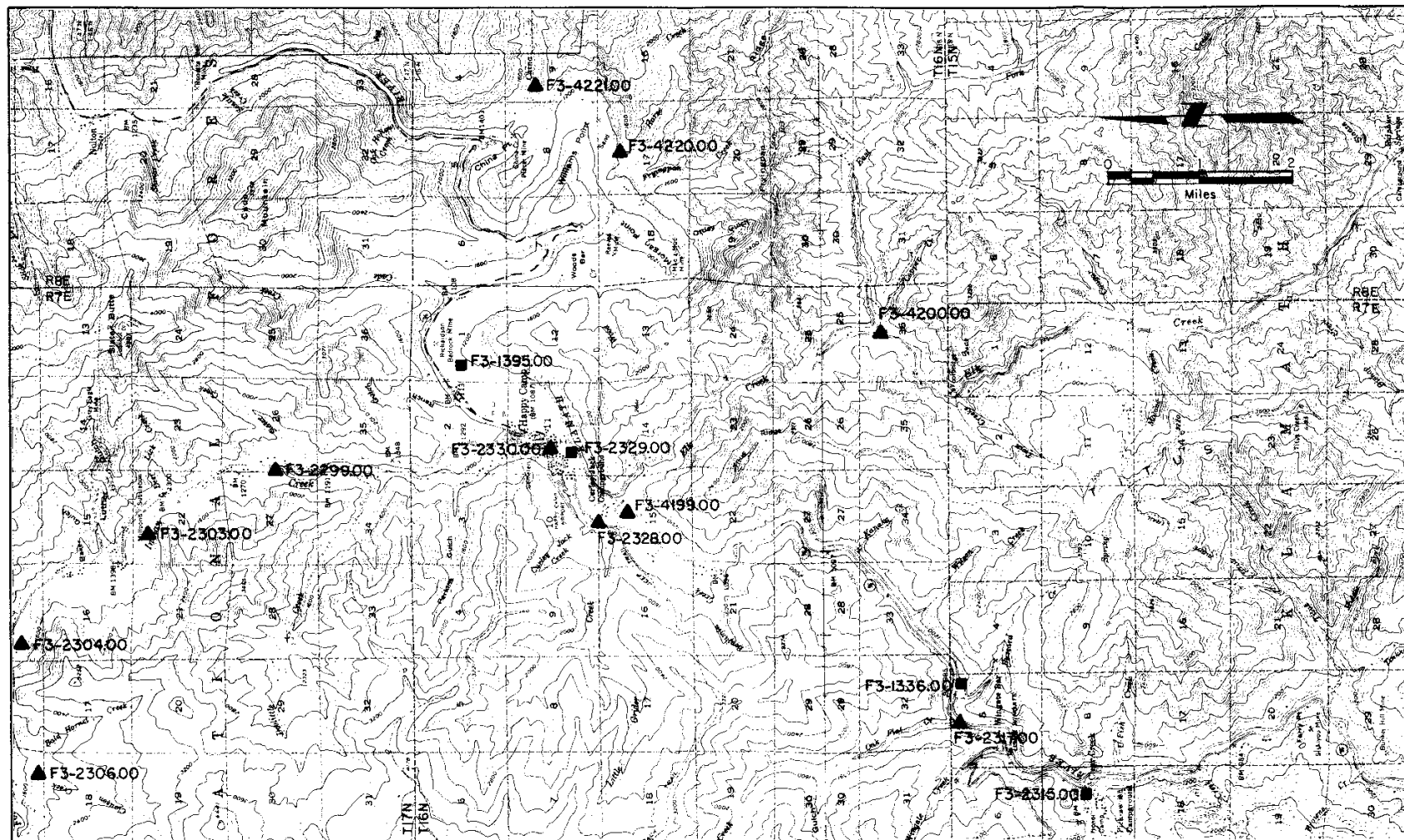
Figure 19



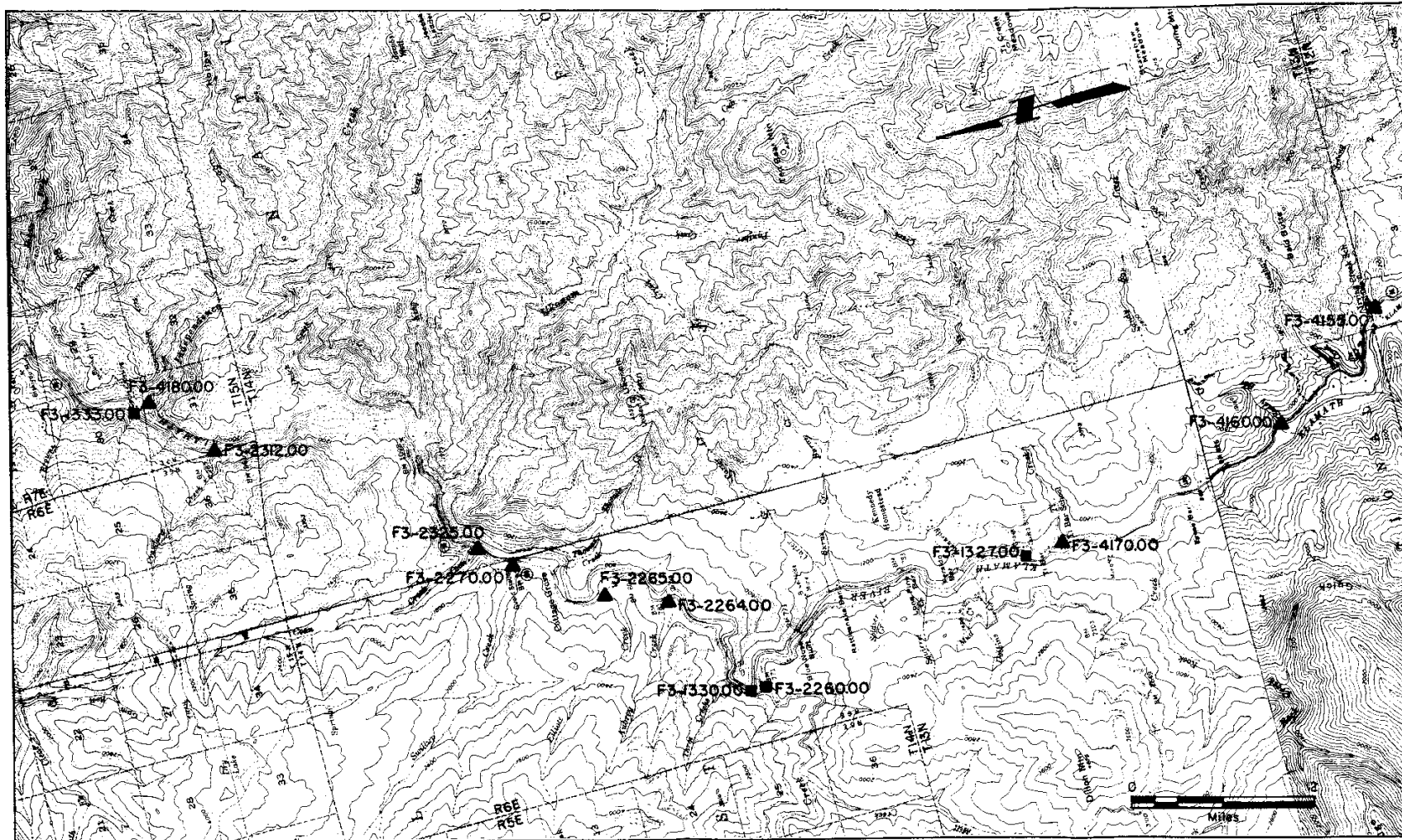
Klamath River Water Quality Study Hamburg to Orleans



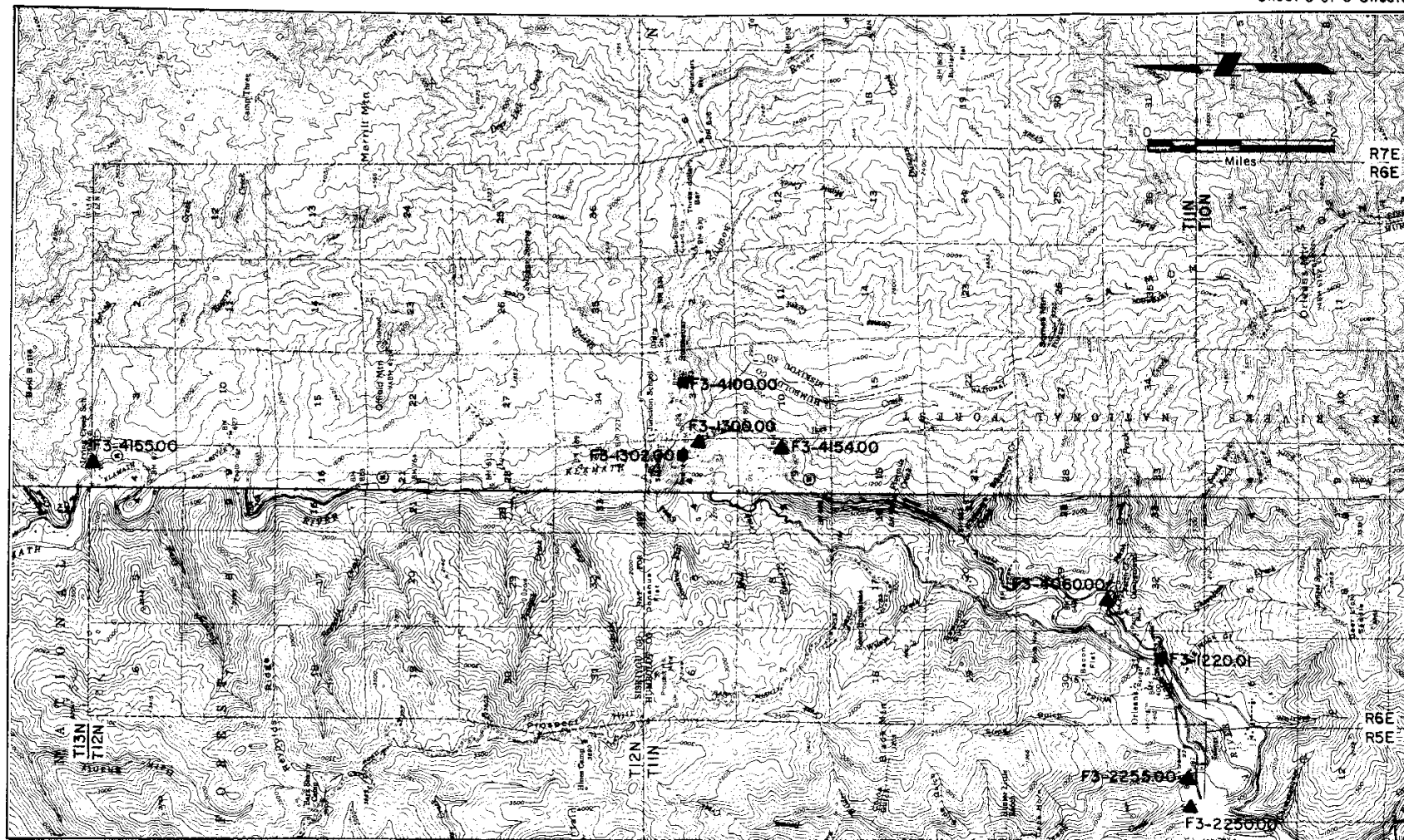
Klamath River Water Quality Study
Hamburg to Orleans



Klamath River Water Quality Study Hamburg to Orleans



Klamath River Water Quality Study
Hamburg to Orleans



Klamath River Water Quality Study
Hamburg to Orleans

APPENDIX A

Mineral Analysis of Surface Water

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	PFM

F3		1220.01	KLAMATH R A ORLEANS				F05A2														
01/16/64 1325	5050 5000		13.4 108	42.1F 5.6C	7.4 8.3	146	--	--	6.8 .30 21	--	63 1.26	--	3.8 .11	--	.1 3E	--		58			S
02/10/64 1525	5050 5000	11100E	13.6 112	44.1F 6.7C	7.6 8.2	143	--	--	7.0 .30 20	--	62 1.24	--	1.5 .04	--	.2 10E	--		60			S
03/09/64 1310	5050 5000	6800	13.0 109	45.0F 7.2C	7.7 8.4	164	--	--	7.2 .31 19	--	71 1.42	--	2.5 .07	--	.1 2E	--		68			S
04/13/64 1300	5050 5000	7800	12.0 109	51.1F 10.6C	7.8 8.3	179	--	--	9.0 .39 21	--	68 1.36	--	3.0 .08	--	.0 4E	--		75			S
05/11/64 1150	5050 5000	8780	11.4 109	55.0F 12.8C	7.8 8.1	121	.11 .55 43	6.0 .49 39	4.9 .21 17	.8 .02 2	53 1.06 86	6.0 .12 10	1.5 .04 3	.7 .01 1	.0 1E	.0 13.0	75 76	52 0	0.3 0.3		
06/02/64 1400	5050 5000	7020	10.6 107	60.1F 15.6C	7.6 8.2	108	--	--	4.5 .20 18	--	48 .96	--	1.0 .03	--	.0 3E	--		46			S
07/13/64 1225	5050 5000	5.81 2460	9.0 106	73.9F 23.3C	8.1 8.3	188	--	--	10 .44 23	--	76 1.52	--	3.0 .08	--	.1 2E	--		74			S
08/10/64 1125	5050 5000	5.35 1840	9.0 105	73.0F 22.8C	8.2 8.2	252	--	--	18 .78 30	--	93 1.86	--	5.4 .15	--	.2 4E	--		93			S
09/14/64 1300	5050 5000	5.42 1910	10.3 110	64.9F 18.3C	8.0 8.0	212	.16 .80 36	9.2 .76 34	14 .61 27	2.4 .06 3	87 1.74 79	15 .31 14	4.6 .13 6	.9 .01 0	.1 3E	-- 22.0	140 136	78 0	0.7 0.9		
10/13/64 1345	5050 5000		10.7 108	60.1F 15.6C	8.2 8.1	208	--	--	14 .61 30	--	88 1.76	--	4.9 .14	--	.0 2E	--		72			S
11/03/64 1305	5050 5000		11.2 107	55.0F 12.8C	8.2 8.2	194	--	--	13 .57 29	--	80 1.60	--	4.3 .12	--	.1 1E	--		70			S
12/01/64 1250	5050 5000		12.3 104	46.0F 7.8C	7.3 7.7	86	--	--	3.5 .15 17	--	34 .68	--	1.4 .04	--	.1 50E	--		37			S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE		B	F	TDS SUM	TH NCH	SAR ASAR				
											CACO3	SO4						CL	NO3	TURB	
* * * * *																					
F3 1220.01			KLAMATH R A DRLEANS										F05A2 CONTINUED								
02/08/65	5050		11.7	43	F	7.7		--	--	6.2	--	62	--	1.3	--	.0	--			59	
1510	5000		95	6	C	8.0	142			.27		1.24		.04		103E	--				S
										19											
03/08/65	5050		9.5	47	F	7.8		--	--	7.1	--	62	--	1.4	--	.0	--			60	
1340	5000		82	8	C	8.1	148			.31		1.24		.04		60E	--				S
										21											
04/12/65	5050		10.1	51	F	8.1		--	--	8.5	--	75	--	3.1	--	.1	--			73	
1425	5000		91	11	C	7.7	182			.37		1.50		.09		20E	--				S
										20											
05/10/65	5050		10.2	56	F	7.8				8.2	1.3	66	14	2.6	1.3	.10	--	101	67	0.4	
1310	5000	9500E	98	13	C	8.4	165	.90	.44	.36	.03	1.32	.29	.07	.02	30E	19.0	105	1	0.5	
								52	25	21	2	78	17	4	1						
06/07/65	5050		9.4	64	F	8.0		--	--	7.6	--	64	--	2.4	--	.00	--			64	
1315	5000	7350E	99	18	C	8.2	161			.33		1.28		.07		25E	--				S
										20											
07/19/65	5050		9.2	72	F	8.2		--	--	15	--	104	--	5.4	--	.10	--			104	
1415	5000	2200E	106	22	C	8.5	266			.65		2.08		.15		4E	--				S
										24											
08/02/65	5050		9.2	74.0F	8.2			--	--	17	--	105	--	6.3	--	.10	--			105	
1340	5050	1970E	108	23.3C	8.3	276				.74		2.10		.18		4E	--				S
										26											
09/20/65	5050		10.3	62.0F	8.1					28	3.7	112	51	7.8	2.2	.10	--	228	110	1.2	
1310	5050	1530E	107	16.7C	8.0	346	2.10	.10	1.22	.09	.03	2.24	1.06	.22	.04	10E	25.0	228	0	1.9	
							60	3	35	3		63	30	6	1						
10/11/65	5050		10.0	61	F	7.8		--	--	22	--	94	--	5.5	--	.0	--			88	
1345	5000	3300	102	16	C	8.4	275			.96		1.88		.16		5E	--				S
										35											
11/08/65	5050		10.9	55.0F	7.6			--	--	13	--	75	--	3.7	--	.1	--			68	
1230	5050	6270	104	12.8C	7.8	195				.57		1.50		.10		25E	--				S
										30											
12/06/65	5050		12.3	48.0F	7.4			--	--	11	--	65	--	3.0	--	.0	--			60	
1200	5050	9160	107	8.9C	8.1	165				.48		1.30		.08		5E	--				S
										29											
01/10/66	5050		13.1	42	F	7.4		--	--	6.1	--	63	--	2.0	--	.0	--			61	
1300	5000	24500E	105	6	C	8.0	148			.27		1.26		.06		75E	--				S
										18											

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	PFM		
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH				

F3 1220.01						KLAMATH R A ORLEANS						F0542 CONTINUED									
02/14/66	5050		13.5	41	F 7.4			7.8		76		2.3		.0					71		
1320	5000	8500E	107	5	C 8.3	171		.34		1.52		.06		15E							S
								19													
03/25/66	5050		12.6	50	F 7.3			6.7		67		1.9		.0					68		
1240	5000	16700E	113	10	C 8.0	157		.29		1.34		.05		40E							S
								18													
04/15/66	5050		11.8	51	F 7.4			6.2		56		1.0		.0					58		
1115	5000	27200E	107	11	C 8.2	143		.27		1.12		.03		50E							S
								19													
05/19/66	5050		10.1	57	F 7.0		11	6.0	4.9	.8	56	5.0	1.9	.6	.0	.1	78	52	0.3		
0945	5000	9750	99	14	C 7.7	122	.55	.49	.21	.02	1.12	.10	.05	.01	10E	12.0	76	0	0.3		
							43	39	17	2	88	8	4	1							
06/15/66	5050		9.6	67	F 7.5			7.3		66		2.5		.0					58		
1025	5000	5190	105	19	C 8.2	146		.32		1.32		.07		5E							S
								22													
07/18/66	5050		9.2	68	F 7.8			12		95		4.0		.0					82		
1310	5000	2400	102	20	C 8.5	207		.52		1.90		.11		5E							S
								24													
08/15/66	5050		9.2	73	F 8.2			24		107		6.0		.0					98		
1125	5000	1850E	107	23	C 8.2	297		1.04		2.14		.17		4E							S
								35													
11/14/66	5050	9.16	10.8	54	F 7.4		13	6.6	7.1	1.4	59		2.2		.1				60	0.4	
1320	5000	8300	102	12	C 8.0	150	.65	.54	.31	.04	1.18		.06		80E				1	0.4	S
							42	35	20	3											
12/12/66	5050	13.27	12.6	46	F 7.3		11	6.6	5.4	1.1	54		2.3		.0				54	0.3	
1100	5000	26600	107	8	C 8.0	129	.55	.54	.23	.03	1.08		.06		90E				1	0.3	S
							41	40	17	2											
01/16/67	5050		13.1	42	F 7.6		14	8.0	12	1.6	75		3.4		.0				68	0.6	
1015	5000	6000	105	6	C 7.9	185	.70	.66	.52	.04	1.50		.10		25E				0	0.8	S
							36	34	27	2											
02/06/67	5050		13.9	45	F 7.6		18	8.7	5.3	.9	76		1.3		.0				81	0.3	
1255	5000	15300	116	7	C 8.1	174	.90	.72	.23	.02	1.52		.04		50E				5	0.3	S
							48	39	12	1											
03/06/67	5050		11.9	46	F 7.8		21	10	3.9	.5	94		1.5		.0				94	0.2	
1200	5000	6810	101	8	C 8.1	199	1.05	.82	.17	.01	1.88		.04		4E				0	0.3	S
							51	40	8	0											

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY		MINERAL	CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM
					PH	EC		CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH		
* * * * *																					
F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED								
04/03/67	5050		11.9	47	F	7.7		16	8.1	6.7	1.2	71		2.2		.0			74	0.3	
1015	5000	8700	102	8	C	8.2	163	.80	.67	.29	.03	1.42		.06		35E			3	0.4	S
								45	37	16	2										
05/08/67	5050		11.9	52.5F		7.6		11	9.7	6.0	1.1	52	7.0	1.6	.8	.0		82	91	0.4	
1210	5000	19400	110	11.4C		7.8	122	.55	.47	.26	.03	1.04	.15	.05	.01	50E	12.0	76	0	0.4	
								42	36	20	2	83		4	1						
06/05/67	5050		10.9	59	F	7.8		11	6.0	7.4	.9	55		1.5		.0			52	0.4	
1045	5000	14200	109	15	C	7.9	135	.55	.49	.32	.02	1.10		.05		50E			0	0.5	S
								40	36	23	1										
07/17/67	5050		8.9	72.0F		8.0				6.9		70		3.3		.0			61		
1010	5050	2550E	103	22.2C		8.3	164			.30		1.40		.09		3E					S
										20											
08/07/67	5050		9.0	71.0F		8.1				9.4		76		6.0		.0			61		
0945	5050	2200E	103	21.6C		8.2	189			.41		1.52		.17		1E					S
										25											
09/11/67	5050		9.1	67.0F		8.0		16	8.3	14	2.6	83	15	5.2	1.4	.0		116	74	0.7	
0945	5050	2000E	100	19.4C		7.9	224	.80	.68	.61	.07	1.66	.31	.15	.02			112	0	0.9	
								37	31	28	3	78		7	1						
10/02/67	5050		9.2	61	F	7.8				14		89		6.2		.0			80		
0935	5050	2268	94	16	C	8.0	227			.61		1.78		.17		3E					S
										28											
11/06/67	5050	5.13	11.5	55	F	8.2				16		90		6.5		.1			81		
1215	5050	2320E	109	13	C	8.1	228			.70		1.80		.18		2E					S
										30											
12/04/67	5050	6.92	12.2	42	F	7.3				12		75		4.4		.1			68		
1225	9050	5260	98	6	C	8.2	193			.52		1.50		.12		35E					S
										28											
01/08/68	5050	5.78	14.0	37	F	7.6				12		76		4.5		.1			65		
1540	5050	3510	104	3	C	7.8	186			.52		1.52		.13		15E					S
										29											
02/05/68	5050	10.01	13.4	42	F	7.7				5.0		60		2.2		.0			66		
1045	5050	12400	107	6	C	8.1	147			.22		1.20		.06		65E					S
										14											
03/04/68	5050	9.92	12.2	48	F	7.6				4.8		61		1.1		.0			64		
1150	5050	13960	106	9	C	8.1	147			.21		1.22		.03		90E					S
										14											

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR		

F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED								
04/01/68	5050	8.24	11.9	51	F	7.8		--	--	4.4	--	59	--	2.0	--	.1	--				
1145	5050	9425	108	11	C	8.0	142			.19		1.18		.06		25E	--		62		
										13											S
05/06/68	5050	6.28	10.5	55	F	7.7		14	6.1	5.1	1.1	60	3.1	2.6	.1	.0	--	90	60	0.3	
1045	5050	5270	100	13	C	8.3	148	.70	.50	.22	.03	1.20	.06	.07	.00	1E	--	68	0	0.3	T
								48	34	15	2	90	5	5	0						
06/03/68	5050	5.64	9.7	63	F	7.8		--	--	5.3	--	60	--	2.4	--	.0	--				
1030	5050	4300	101	17	C	7.9	142			.23		1.20		.07		3E	--		59		S
										16											
07/08/68	5050	3.37	8.8	75	F	8.0		--	--	7.5	--	82	--	3.6	--	.1	--				
1250	5050	1850	105	24	C	8.1	195			.33		1.64		.10		1E	--		79		S
										17											
08/05/68	5050	3.08	9.7	71	F	8.2		--	--	13	--	88	--	5.0	--	.1	--				
1030	5050	1380	111	22	C	8.3	212			.57		1.76		.14		4E	--		79		S
										27											
09/09/68	5050	3.42	9.9	69	F	8.2		17	9.1	14	2.4	89	10	5.3	.1	.1	--	136	80	0.7	
1210	5050	1580	111	21	C	7.7	216	.85	.75	.61	.06	1.78	.21	.15	.00	2E	--	111	0	0.9	
								37	33	27	3	83	10	7	0						
09/30/68	5050	3.33	10.9	64	F	8.3		--	--	17	--	96	--	6.5	--	.1	--				
1545	5050	1520	115	18	C	7.9	244			.74		1.92		.18		41E	--		92		S
										29											
11/11/68	5050	6.37	11.0	55	F	7.6		--	--	9.4	--	71	--	3.9	--	.1	--				
1430	5050	4100	105	13	C	7.9	169			.41		1.42		.11		10E	--		66		S
										24											
12/02/68	5050	5.35	13.3	44	F	8.0		--	--	11	--	76	--	4.3	--	.0	--				
1515	5050	4320	110	7	C	8.2	186			.48		1.52		.12		5E	--		80		S
										23											
02/03/69	5050	9.35	13.8	41	F	7.5		--	--	8.5	--	75	--	3.1	--	.0	--				
1000	5050	12500	109	5	C	8.0	176			.37		1.50		.09		95E	--		82		S
										18											
03/03/69	5050	8.57	13.7	44	F	7.9		--	--	9.3	--	80	--	3.4	--	.0	--				
1115	5050	9630	113	7	C	7.4	193			.40		1.60		.10		35E	--		87		S
										19											
04/07/69	5050	11.75	13.2	48	F	7.7		--	--	10	--	70	--	2.7	--	.0	--				
1225	5050	19200	115	9	C	7.6	182			.44		1.40		.08		100E	--		68		S
										24											

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL	CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER						
					LABORATORY PH	EC		CA	MG	NA	K	MILLIEQUIVALENTS PER LITER				TURB	B SID2	F	TDS SUM	TH NCH	SAR ASAR	RFM
												PERCENT	REACTANCE	VALUE	NO3							

F3 1220.01						KLANATH R A ORLEANS						F05A2 CONTINUED										
05/12/69	5050	14.04	12.6	54	F	7.3		7.5	4.2	2.4	1.0	35	3.3	1.2	.4	.0	--	44	36	0.2		
1240	5050	29200	118	12	C	7.4	80	.37	.35	.10	.03	.70	.07	.03	.01	120E	--	41	1	0.1		
								44	41	12	4	86	9	4	1							
06/09/69	5050	7.89	11.0	60	F	8.0		--	--	3.6	--	44	--	1.7	--	.0	--		43			
1225	5050	9800	111	16	C	7.7	100			.16		.88		.05	--	20E	--					
										16										S		
07/14/69	5050	3.65	9.3	70	F	8.0		--	--	6.6	--	74	--	3.1	--	.0	--		70			
1245	5050	2750	105	21	C	7.8	159			.29		1.48		.09	--	4E	--			S		
										17												
08/04/69	5050	2.88	10.3	72	F	8.2		--	--	11	--	83	--	4.5	--	.1	--		76			
1210	5050	1920	119	22	C	8.2	194			.48		1.66		.13	--	10E	--			S		
										24												
09/08/69	5050	2.72	10.0	71	F	8.1		19	9.1	20	2.5	92	26	6.2	.0	.1	--	141	85	0.9		
1245	5050	1370	114	22	C	7.7	255	.95	.75	.87	.06	1.84	.54	.17	.00	15E	--	138	0	1.3		
								36	29	33	2	72	21	7	0							
10/06/69	5050	2.80	12.2	57	F	8.3		--	--	15	--	91	--	6.7	--	.1	--		81			
1210	5050	1450	119	14	C	8.0	223			.65		1.82		.19	--	2E	--			S		
										29												
11/03/69	5050	3.73	12.1	54	F	8.0		--	--	20	--	95	--	6.4	--	.1	--		82			
1405	5050	2620	114	12	C	7.9	247			.87		1.90		.18	--	4E	--			S		
										35												
12/01/69	5050	4.38	14.0	43	F	8.0		--	--	15	--	84	--	6.5	--	.2	--		72			
1315	5050	3940	114	6	C	7.7	210			.65		1.68		.18	--	3E	--			S		
										31												
01/05/70	5050	6.80	14.8	38	F	7.3		--	--	8.8	--	69	--	3.5	--	.1	--		67			
1445	5050	8000	112	3	C	7.3	170			.38		1.38		.10	--	20E	--			S		
										22												
02/02/70	5050	12.65	14.5	43	F	7.8		--	--	6.5	--	65	--	1.9	--	.2	--		62			
1235	5050	29600	118	6	C	7.6	148			.28		1.30		.05	--	220E	--			S		
										18												
03/09/70	5050	10.19	13.4	46	F	7.6		--	--	7.7	--	67	--	3.1	--	.1	--		61			
1350	5050	19100	114	8	C	8.0	150			.33		1.34		.09	--	80E	--			S		
										21												
04/06/70	5050	5.63	12.7	50	F	7.6		--	--	6.9	--	70	--	2.5	--	.2	--		68			
1250	5050	7040	113	10	C	8.0	164			.30		1.40		.07	--	8E	--			S		
										18												

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL	CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
					LABORATORY PH	EC		CACO3	MG	NA	K	PERCENT REACTANCE VALUE			TURB	F SI02							
												SD4	CL	NO3									

F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED										
05/11/70	5050	5.43	12.8	48	F	7.6		14	6.6	6.2	1.2	62	9.7	3.2	.2	.1	--	95	62	0.3			
1230	5050	6610	111	9	C	8.1	152	.70	.54	.27	.03	1.24	.20	.09	.00	8E	--	78	0	0.4			
								45	35	18	2	81	13	6	0								
06/08/70	5050	4.74	10.1	63	F	7.9		--	--	8.5	--	63	--	2.8	--	.1	--		61				
1035	5050	5270	106	17	C	8.2	152			.37		1.26		.08		10E	--						
										23											S		
07/06/70	5050	2.48	9.3	73	F	8.0		--	--	12	--	87	--	3.5	--	.0	--		84				
1100	5050	2550	108	23	C	8.0	218			.52		1.74		.10		2E	--				S		
										24													
08/10/70	5050	1.68	9.3	73	F	8.0		--	--	19	--	104	--	7.1	--	.1	--		95				
1015	5050	1700	108	23	C	7.6	270			.83		2.08		.20		4E	--				S		
										30													
09/14/70	5050	1.39	11.0	61	F	8.0		17	9.8	17	2.8	92	19	5.5	.7	.0	--	144	83	0.8			
1150	5050	1830	112	16	C	8.3	238	.85	.81	.74	.07	1.84	.40	.16	.01	10E	--	127	0	1.2			
								34	33	30	3	76	17	7	0								
10/19/70	5050	1.65	11.6	55.4F	8.0			--	--	17	--	94	--	6.6	--	.1	--		88				
1110	5050	2110	111	13.0C	7.7	215				.74		1.88		.19		10E	--				S		
										30													
11/09/70	5050	11.11	12.1	51.0F	7.5			--	--	4.8	--	55	--	1.6	--	.0	--		49				
1245	5050	24300	110	10.5C	7.4	118				.21		1.10		.05		110E	--				S		
										18													
12/07/70	5050	16.63	13.0	45.0F	7.3			--	--	4.6	--	53	--	2.1	--	.0	--		53				
1215	5050	58400	109	7.2C	7.6	125				.20		1.06		.06		360E	--				S		
										16													
01/04/71	5050	7.56	14.1	39.2F	7.4			--	--	7.5	--	72	--	3.2	--	.1	--		78				
1425	5050	11100	108	4.0C	7.8	176				.33		1.44		.09		35E	--				S		
										17													
02/01/71	5050	10.10	13.6	43	F	7.6		--	--	4.9	--	63	--	1.9	--	.0	--		70				
1200	5050	18700	111	6	C	7.8	142			.21		1.26		.05		70E	--				S		
										13													
03/01/71	5050	7.72	13.6	42	F	7.5		--	--	7.2	--	69	--	3.3	--	.0	--		66				
1215	5050	11600	109	6	C	7.8	163			.31		1.38		.09		45E	--				S		
										19													
04/05/71	5050	12.14	12.1	50	F	7.6		--	--	6.4	--	64	--	1.8	--	.1	--		61				
1235	5050	24600	108	10	C	7.9	147			.28		1.28		.05		80E	--				S		
										19													

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM	
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SIO2	TDS S/M	TH NCH			

F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED							
05/03/71	5050	11.21	11.7	51	F 7.4		10	5.8	4.2	1.2	52	2.1	.7	.5	.1	--	53	50	0.3	
1100	5050	19500	106	11	C 7.7	114	.50	.48	.18	.03	1.04	.04	.02	.01	90E	--	56	0	0.3	
							42	40	15	3	94	4	2	1						
06/21/71	5050	7.90	11.2	59	F 7.4		--	--	3.0	--	45	--	.2	--	.1	--		44		
1050	5050	8750	112	15	C 8.3	98			.13		.90		.01		6E	--				
									13											S
07/19/71	5050	4.93	9.3	70	F 7.7		--	--	5.7	--	66	--	2.6	--	.0	--		63		
1155	5050	3820	105	21	C 8.0	144			.25		1.32		.07		10E	--				S
									17											
08/16/71	5050	3.09	9.9	70	F 7.9		--	--	8.4	--	84	--	4.8	--	.2	--		79		
1115	5050	2250	112	21	C 7.8	188			.37		1.68		.14		1E	--				S
									19											
09/13/71	5050	2.96	10.0	66	F 7.9		18	8.0	13	2.1	89	12	4.4	.5	.1	--	112	78	0.6	
1125	5050	2180	108	19	C 8.0	206	.90	.66	.57	.05	1.78	.25	.12	.01	1E	--	111	0	0.9	
							41	30	26	2	82	12	6	0						
10/19/71	5050	4.39	10.8	55.0F	7.7	195	--	--	14	--	88	--	5.4	--	.0	--		78		
1035	5050	4200E	103	12.8C	8.0	208			.61		1.76		.15		25E	--				S
									28											
11/09/71	5050	4.75	12.3	46.4F	7.6	192	15	7.6	14	1.9	78	13	3.3	3.8	.1	--	147	69	0.7	F
1300	5050	4400	105	8.0C	7.6	200	.75	.63	.61	.05	1.56	.27	.09	.06		--	105	0	0.9	T
							37	31	30	2	79	14	5	3						
11/09/71	5050		12.0	48.0F	7.6	170	--	--	--	--	--	--	--	--	--	--				
2330	5050	6000E	104	8.9C											69AF	--				
11/10/71	5050		12.3	46.6F	7.4	149	--	--	--	--	--	--	--	--	--	--				
0415	5050		105	8.1C											72AF	--				
11/10/71	5050		12.2	47.5F	7.5	164	--	--	--	--	--	--	--	--	--	--				
0645	5050		105	8.6C											74AF	--				
11/10/71	5050		11.9	46.6F	7.3	138	--	--	--	--	--	--	--	--	--	--				
1045	5050		102	8.1C											89AF	--				
11/10/71	5050	9.30	12.8	46.9F	7.4	123	--	--	--	--	--	--	--	--	--	--				
1615	5050	12500E	110	8.3C		135									40E	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	

F3 1220.01				KLAMATH R A ORLEANS				F05A2 CONTINUED											
12/13/71	5050	8.46	13.8	40.1F	7.4	169	--	--	10	--	64	--	2.4	--	.1	--		61	
1145	5050	10500	108	4.5C	7.5	168			.44		1.28		.07		25E				S
									27										
01/10/72	5050	6.10	13.6	39.2F	7.5	190	--	--	--	--	--	--	--	--	--	--			
1150	0000	6150	105	4.0C											5E				S
02/07/72	5050	18.00	13.2	43 F	7.4	150	--	--	--	--	--	--	--	--	--	--			
1230	0000	9500	107	6 C											25E				S
03/06/72	5050	16.62	12.5	46.4F	7.6	126	--	--	6.0	--	55	--	1.9	--	.0	--		56	
1145	5050	47000	106	8.0C	7.6	129			.26		1.10		.05		140A				S
									19										
04/10/72	5050	9.33	12.0	47.3F	7.4	123	--	--	4.6	--	54	--	.4	--	.0	--		57	
1115	5050	12500	103	8.5C	7.7	129			.20		1.08		.01		19A				S
									15										
05/01/72	5050	7.91	11.6	52.7F	7.6	140	--	--	6.8	--	58	--	3.4	--	.1	--		56	
1100	5050	10100	107	11.5C	7.9	140			.30		1.16		.10		3A				S
									21										
06/05/72	5050	5.96	9.8	62.2F	7.6	112	--	--	4.4	--	49	--	.4	--	.0	--		49	
1030	5050	7300	102	16.8C	7.5	118			.19		.98		.01		4A				S
									16										
07/11/72	5050	2.39	9.1	70 F	7.9	166	--	--	--	--	--	--	--	--	--	--			
1045	0000	2500	103	21 C											0A				
08/01/72	5050	1.75	9.2	70.7F	8.1	180	--	--	--	--	--	--	--	--	--	--			
1045	0000	1720	105	21.5C											2A				
08/02/72	5050		9.0	73.4F	8.2	187	--	--	--	--	--	--	--	--	--	--			
1623	5050	2000E	105	23.0C											2AF				
08/02/72	5050		7.9	73.9F	8.4	187	--	--	--	--	--	--	--	--	--	--			
2250	5050		93	23.3C											2AF				
08/03/72	5050		8.2	72.0F	7.8	189	--	--	--	--	--	--	--	--	--	--			
0445	5050		95	22.2C											2AF				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM

F3 1220.01				KLAMATH R A ORLEANS						F05A2 CONTINUED									
08/03/72	5050		9.5	72.5F	8.1	191	--	--	--	--	--	--	--	--	--				
1005	5050		110	22.5C										2AF	--				
08/03/72	5050		9.2	77.0F	8.2	191	--	--	--	--	--	--	--	--	--				
1500	5050		112	25.0C										2AF	--				
08/03/72	5050		7.7	75.0F	8.4	190	--	--	--	--	--	--	--	--	--				
2230	5050		92	23.9C										2AF	--				
08/04/72	5050		7.7	72.5F	7.8	188	--	--	--	--	--	--	--	--	--				
0440	5050		89	22.5C										2AF	--				
09/04/72	5050	2.20	9.5	73.0F	8.0	192	--	--	9.6	--	78	--	3.0	--	.1		71		
0950	5050	2200E	111	22.8C	7.8	189			.42		1.56		.08		1A	--			S
									23										
09/12/72	5050	2.14	10.5	62.6F	8.0	289	--	--	13	--	85	--	5.5	--	.1		74		X
1100	5050	2250	109	17.0C	7.6	201			.57		1.70		.16		2A	--			S
									28										
10/02/72	5050	2.57	10.0	61 F	7.9	232	--	--	--	--	--	--	--	--	--				
1100	0000	2840	102	16 C										1A	--				S
11/13/72	5050	3.94	11.5	49.1F	7.6	178	--	--	--	--	--	--	--	--	--				
1145	5050	4500	102	9.5C										5AF	--				S
12/04/72	5050	4.54	12.3	42.8F	7.8	179	--	--	--	--	--	--	--	--	--				
1130	5050	5300	100	6.0C										5AF	--				S
01/16/73	5050	14.20	12.5	42.8F	7.4	105	--	--	4.6	--	43	--	5.6	--	.0		50		
1145	5050	34600	101	6.0C	7.1	107			.20		.86		.16		120A	--			S
									17										
02/05/73	5050	7.88	12.7	42.8F	7.8	158	--	--	--	--	--	--	--	--	--				
1100	5050	10600	103	6.0C										14AF	--				
03/05/73	5050	7.72	11.3	45.5F	7.4	161	--	--	--	--	--	--	--	--	--				
1145	5050	10200	95	7.5C										5AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER							REM
						CA	MG	NA	K	PERCENT CACO3	SO4	CL	NO3	B TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR				

F3		1220.01	KLAMATH R A ORLEANS						F05A2 CONTINUED													
04/02/73	5050	6.24	11.5	45.0F	7.8	159	--	--	--	--	--	--	--	--	--	--	--	--				
1115	5050	6500	96	7.2C											2AF	--						
05/22/73	5050	6.19	10.4	58.1F	7.4	106	--	--	--	--	--	--	--	--	--	--	--	--				
1045	5050	6770	103	14.5C											3AF	--						
06/19/73	5050	2.92	9.8	62.6F	7.8	171	--	--	7.2	--	73	--	2.9	--	.0	--		70				
1050	5050	2900	102	17.0C	7.6	169			.31		1.46		.08		14	--						
									18										S			
07/09/73	5050	1.68	10.0	69.8F	8.0	190	--	--	--	--	--	--	--	--	--	--	--	--				
1030	5050	1820	113	21.0C											2AF	--			S			
08/06/73	5050	0.75	10.1	74.3F	8.1	193	--	--	--	--	--	--	--	--	--	--	--	--				
1300	5050	1430E	119	23.5C											1AF	--			S			
09/11/73	5050	0.09	11.4	67.1F	8.1	195	--	--	--	--	--	--	--	--	--	--	--	--				
1105	5050	1260E	125	19.5C											1AF	--			S			
10/01/73	5050	0.58	12.0	61.7F	7.9	230	--	--	--	--	--	--	--	--	--	--	--	--				
1105	5050	1650	124	16.5C											1AF	--			S			
11/13/73	5050	13.80	13.1	46.4F	7.3	100	11	4.5	3.4	1.2	44	6.6	.5	.6	.0	--	82	46	0.2	E		
1205	5050	33600	112	8.0C	8.0	105	.55	.37	.15	.03	.88	.14	.01	.01	103A	--	54	2	0.2	T		
							50	34	14	3	85	13	1	1								
12/10/73	5050	10.28	14.5	44.6F	7.4	128	--	--	--	--	--	--	--	--	--	--	--	--				
1225	5050	19000	121	7.0C											25AF	--						
01/14/74	5050		14.2	44.6F	8.2	112	--	--	--	--	--	--	--	--	--	--	--	--				
1245	5050	50000E	118	7.0C											99AF	--						
02/04/74	5050	11.51	14.2	41.9F	7.7	147	--	--	--	--	--	--	--	--	--	--	--	--				
1145	5050	21300	114	5.5C											40AF	--						
03/04/74	5050	11.56	14.5	45.5F	7.5	160	--	--	--	--	--	--	--	--	--	--	--	--				
1255	5050	19500	122	7.5C											41AF	--						

[illegible]

FOIA2 CONTINUED

S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM		
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR			
											CACD3	SO4	CL	NO3								

F3		1220.01	KLANATH R A ORLEANS										F05A2 CONTINUED									
04/14/75	5050	9.28	11.0	48.2F	7.6	159	--	--	6.4	--	71	--	1.5	--	.0	--	65					
1115	5050	16000	96	9.0C	8.0				.28		1.42		.04		22A					18		
05/12/75	5050	11.07	11.3	55.4F	7.8	122	--	--	--	--	--	--	--	--	--	--						
1110	0000	22000	108	13.0C										184F	--							
06/09/75	5050	10.57	10.0	59.0F	8.4	107	--	--	--	--	--	--	--	--	--	--						
1000	0000	15800	100	15.0C										11AF	--							
07/07/75	5050	4850E	9.0	68.0F	7.9	133	--	--	5.0	--	58	--	2.8	--	.0	--	56					
1120	5050		99	20.0C	7.6	126			.22	1.16	.08	1A	--									
								16														
08/11/75	5050	1.74	9.0	74.3F	8.2	180	--	--	8.8	--	78	--	5.4	--	.1	--	71					
1105	5050	2330	106	23.5C	7.4	178			.38	1.56	.15	1A	--									
								21														
09/02/75	5050	1.70	9.7	66.2F	8.2	193	--	--	--	--	--	--	--	--	--	--						
1105	0000	2320E	105	19.0C										2AF	--							
10/06/75	5050	1.97	9.7	61.7F	8.2	224	--	--	--	--	--	--	--	--	--	--						
1030	0000	2690	100	16.5C										1AF	--							
11/03/75	5050	5.06	10.9	51.8F	7.8	172	--	--	--	--	--	--	--	--	--	--						
1155	0000	7000	100	11.0C										5AF	--							
12/01/75	5050	6.82	11.7	44.6F	7.6	145	--	--	--	--	--	--	--	--	--	--						
1140	0000	9560	97	7.0C										6AF	--							
01/05/76	5050	6.21	12.8	42.8F	7.6	157	--	--	--	--	--	--	--	--	--	--						
1305	0000	8600	104	6.0C										8AF	--							
02/02/76	5050	5.12	13.3	44.6F	8.3	169	--	--	--	--	--	--	--	--	--	--						
1150	0000	6420	111	7.0C										4AF	--							
03/01/76	5050	10.36	12.1	44.6F	7.9	135	--	--	--	--	--	--	--	--	--	--						
1150	0000	19500	101	7.0C										15AF	--							

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	PEM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	F SI02	TDS SUM	TH NCH		
											CAC03	SO4	CL	NO3						

F3		1220.01	KLAMATH R A ORLEANS								F05A2 CONTINUED									
04/05/76	5050	6.05	11.1	51.8F	8.0			--	--	9.0	--	66	--	2.9	--	.1	--		62	
1145	5050	8510	102	11.0C	7.8	156				.39		1.32		.08		2A	--			S
										24										
05/03/76	5050	6.21	11.0	55.4F	7.8	118				--	--	--	--	--	--	--	--			
1100	0000	9210	105	13.0C												2AF	--			
06/07/76	5050	3.09	10.5	59.0F	7.8	139				--	--	--	--	--	--	--	--			
1015	0000	3880	105	15.0C												1AF	--			
07/12/76	5050	1.14	10.0	71.6F	7.8	160				--	--	--	--	--	--	--	--			
1100	0000	2060	115	22.0C												2AF	--			
08/02/76	5050	0.98	10.1	71.6F	8.0	170				--	--	--	--	--	--	--	--			
1240	0000	1950	116	22.0C												0AF	--			
09/13/76	5050	0.94	10.4	68.0F	8.0	212				--	--	--	--	--	--	--	--			
1100	0000	2270	115	20.0C												2AF	--			
10/04/76	5050	1.32	10.2	61.7F	8.0	265				--	--	21	--	98	--	7.4	--	.1	--	88
1000	5050	2510	105	16.5C	8.2	320						.91		1.96		.21		2A	--	S
												34								
11/08/76	5050	2.47	11.2	52.7F	8.0	236				--	--	--	--	--	--	--	--			
1145	0000	3860	104	11.5C												3AF	--			
12/06/76	5050	2.07	13.1	42.8F	7.6	205				--	--	16	--	80	--	5.5	--	.1	--	74
1145	5050	3380	106	6.0C	8.2	214						.70		1.60		.16		2A	--	S
												32								
01/04/77	5050	1.49	14.5	39.2F	8.2	189				--	--	--	--	--	--	--	--			
1355	0000	2700	111	4.0C												2AF	--			
02/01/77	5050	1.27	14.8	42.8F	8.0	199				--	--	12	--	82	--	5.4	--	.1	--	78
1145	5050	2450	120	6.0C	7.7	201						.52		1.64		.15		1A	--	S
												25								
03/07/77	5050	1.23	12.9	46.4F	8.0	192				--	--	--	--	--	--	--	--			
1215	0000	2410	110	8.0C												1AF	--			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN	MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE	MILLIGRAMS PER LITER B F TURB SIO2	TDS SUM	TH NCH	SAR ASAR	REM
CA	MG	NA	K	CAC03	SO4	CL	NO3					
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
F3 1220.01		KLAMATH R A ORLEANS						F05A2 CONTINUED				
04/04/77	5050	1.48	12.6	54 F	8.0	164	--	--	--	--	--	--
1115	5050	2690	118	12 C						1AF	--	
05/02/77	5050		12.0	57.2F	8.2	164	--	--	8.6	--	66	
1030	5050	4200E	117	14.0C	7.6	165	--	--	.37	1.32	--	64
									22			S
06/13/77	5050	1.24	10.8	68.0F	8.2	200	--	--	12	79	--	74
1015	5050	2450E	119	20.0C	7.5	201	--	--	.52	1.58	--	S
									26			
07/11/77	5050	2.10	9.8	75.2F	8.2	244	--	--	17	94	--	86
1030	5050	1290	117	24.0C	7.9	245	--	--	.74	1.88	--	S
									30			
08/08/77	5050	1.82	9.1	75.2F	8.1	230	--	--	--	--	--	
0945	5050	1110	108	24.0C						1AF	--	
09/19/77	5050	1.14	9.5	64.4F	7.9	192	--	--	--	--	--	
1045	5050	1970	101	18.0C						1AF	--	
10/11/77	5050	0.78	10.2	58.1F	7.9	216	--	--	--	--	--	
0945	5050	1870	101	14.5C						1AF	--	
11/01/77	5050	1.78	10.9	55.4F	7.8	164	--	--	--	--	--	
1115	5050	3240	104	13.0C						1AF	--	
12/06/77	5050	5.97	11.5	46.4F	8.0	139	--	--	--	--	--	
1030	5050	8200	98	8.0C						4AF	--	
01/03/78	5050	7.93	12.6	45.5F	7.5	150	--	--	--	--	--	
1130	5050	13400	106	7.5C						10AF	--	
02/07/78	5050	10.94	12.7	47.3F	7.5	115	--	--	--	--	--	
1135	5050	21500	110	8.5C						30AF	--	
03/06/78	5050	7.44	10.9	50.0F	7.6	145	--	--	--	--	--	
1125	5050	12300	97	10.0C						5AF	--	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM	
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE			TDS SUM	TH NCH						
											CACO3	SO4	CL								

F3		1220.01	KLAMATH R A ORLEANS				F05A2 CONTINUED														
04/03/78	5050	7.87	11.4	50.0F	7.5	140	--	--	--	--	--	--	--	--	--						
1145	5050	13300	102	10.0C											5AF	--					
05/08/78	5050	6.10	10.8	57.2F	7.7	136	--	--	--	--	--	--	--	--	--						
1015	5050	9580	106	14.0C											2AF	--					
06/05/78	5050	5.36	9.7	64.4F	7.8	108	--	--	--	--	--	--	--	--	--						
0945	5050	7400	103	18.0C											2AF	--					
07/10/78	5050	2.33	9.1	69.8F	8.0	159	--	--	--	--	--	--	--	--	--						
1015	5050	3340	103	21.0C											1AF	--					
08/07/78	5050	0.90	8.9	78.8F	8.0	178	--	--	--	--	--	--	--	--	--						
1000	5050	1840	110	26.0C											1AF	--					
09/11/78	5050	3.44	9.7	61.7F	7.6	152	13	6.9	7.7	1.1	64	5.1	3.1	1.1	.0	--	106	61	0.4		
1100	5050	5150	100	16.5C	7.9	155	.65	.57	.33	.03	1.28	.11	.09	.02	3A	--	76	0	0.5	T	
							41	36	21	2	85	7	6	1							
10/02/78	5050	1.17	10.0	62.6F	8.0	201	--	--	--	--	--	--	--	--	--						
0945	5050	2190	104	17.0C											1AF	--					
11/06/78	5050	1.12	11.7	51.8F	8.1	215	--	--	--	--	--	--	--	--	--						
1200	5050	2180	107	11.0C											1AF	--					
12/05/78	5050	3.78	12.6	44.6F	8.0	172	--	--	--	--	--	--	--	--	--						
1110	5050	5480	105	7.0C											3AF	--					
01/02/79	5050	50.74	11.8	35.6F	7.6	207	--	--	14	--	86	--	5.9	--	.1	--		76			
1100	5050	4500E	86	2.0C	7.7	208			.61		1.72		.17		2A	--					
									29											S	
02/13/79	5050	11.60	12.2	45.5F	7.5	93	8.0	5.0	3.0	.8	39	5.0	1.0	.6	.0	--	70	40	0.2	E	
1240	5050	23800	103	7.5C	7.6	98	.40	.41	.13	.02	.78	.10	.03	.01	55A	--	47	2	0.2	T	
							42	43	14	2	85	11	3	1							
03/12/79	5050	8.15	11.7	49.1F	7.4	139	--	--	--	--	--	--	--	--	--						
1035	5050	14000	103	9.5C											6AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR		
											CACO3	SO4	CL	NO3							
* * * * *																					
F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED								
04/03/79	5050	4.52	12.2	52.7F	7.9	173	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1215	5050	6260	113	11.5C												2AF	--				
05/07/79	5050	8.33	12.1	50.0F	7.4	122	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1225	5050	14400	108	10.0C												3AF	--				
06/05/79	5050	3.37	9.4	68.9F	7.8	134	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1220	5050	4940	105	20.5C												1AF	--				
07/09/79	5050	1.29	9.2	68.9F	7.9	169	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1045	5050	1950	103	20.5C												1AF	--				
08/07/79	5050	0.97	8.9	73.4F	8.2	174	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1035	5050	2120	104	23.0C												2AF	--				
09/05/79	5050	1.20	10.0	69.8F	8.2	195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1205	5050	1830	113	21.0C												2AF	--				
10/01/79	5050	1.10	10.4	65.3F	8.1	213	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1105	5050	1740	112	18.5C												1AF	--				
11/05/79	5050	5.00	11.2	51.8F	7.5	139	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1115	5050	7020	102	11.0C												3AF	--				
12/04/79	5050	9.19	12.5	46.4F	7.5	124	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1135	5050	16600	106	8.0C												27AF	--				
01/08/80	5050	6.79	12.6	46.4F	7.8	146	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1140	5050	10600	107	8.0C												3AF	--				
02/04/80	5050	8.86	12.5	48.2F	8.3	149	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1145	5050	16800	109	9.0C												15AF	--				
03/03/80	5050	9.58	12.1	48.2F	7.7	156	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1040	5050	18900	108	9.0C												21AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	ASAR	

F3 1220.01				KLAMATH R A ORLEANS						F05A2 CONTINUED									
04/07/80	5050	6.67	10.7	50.0F	7.5	206	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050	10200	96	10.0C										3AF	--				
05/05/80	5050	7.59	11.2	62.6F	8.3	130	12	6.0	6.0	1.0	53	--	2.0	--	.0	--	54	0.4	
1050	5050	12400	117	17.0C	7.9	129	.60	.49	.26	.03	1.06		.06	--	5A	--	2	0.4	S
							43	36	19	2									
06/03/80	5050	4.28	10.7	59.0F	7.8	144	--	--	--	--	--	--	--	--	--	--	--	--	
1015	5050	5040	107	15.0C										2AF	--				S
07/08/80	5050	2.98	9.5	70.7F	8.1	173	--	--	--	--	--	--	--	--	--	--	--	--	
1200	5050	3090	108	21.5C										1AF	--				S
08/19/80	5050	1.96	9.2	72.5F	8.1	212	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050	1930	107	22.5C										2AF	--				S
09/15/80	5050	2.05	10.3	66.2F	8.2	200	--	--	--	--	--	--	--	--	--	--	--	--	
1325	5050	2010	112	19.0C										1AF	--				S
10/13/80	5050	2.29	10.6	57.0F	8.0	206	--	--	--	--	--	--	--	--	--	--	--	--	
1100	5050	2200	103	13.9C										2AF	--				S
11/10/80	5050	2.55	12.2	53.0F	8.3	179	--	--	--	--	--	--	--	--	--	--	--	--	
1245	5050	2590	113	11.7C										2AF	--				S
12/09/80	5050	4.30	12.8	41.0F	7.4	174	--	--	--	--	--	--	--	--	--	--	--	--	
1140	5050	7390	101	5.0C										3AF	--				S
01/04/81	5050	4.28	12.5	46.4F	7.9	162	--	--	--	--	--	--	--	--	--	--	--	--	
1335	5050	5410	106	8.0C										2AF	--				S
02/02/81	5050	4.62	13.5	46.4F	8.0	180	--	--	--	--	--	--	--	--	--	--	--	--	
1150	5050	6110	115	8.0C										2AF	--				S
03/02/81	5050	5.58	12.1	48.2F	7.6	169	--	--	--	--	--	--	--	--	--	--	--	--	
1320	5050	7670	106	9.0C										3AF	--				S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	TH NCH	TDS SUM	REM		
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE			TURB	F SIO2	B								
											CACO3	SO4	CL				NO3							

F3		1220.01	KLAMATH R A ORLEANS				F05A2 CONTINUED																	
04/06/81 1330	5050 5050	5.37 7220	11.4 107	53.6F 12.0C	7.9	174	--	--	--	--	--	--	--	--	--	3AF	--							
05/11/81 1200	5050 5050	3.68 3820	10.4 107	61.7F 16.5C	8.2	161	--	--	--	--	--	--	--	--	--	1AF	--							
06/22/81 1305	5050 5050	2.48 2010	9.3 107	71.6F 22.0C	8.0	182	--	--	--	--	--	--	--	--	--	1AF	--							
07/13/81 1230	5050 5050	1.62 1000E	9.6 110	71.6F 22.0C	8.0	205	--	--	--	--	--	--	--	--	--	1AF	--							
08/11/81 1150	5050 5050	1.23 1440	9.1 114	80.6F 27.0C	8.1	203	--	--	--	--	--	--	--	--	--	1AF	--							
09/15/81 1220	5050 5050	0.97 1250	9.4 111	74.3F 23.5C	8.1 7.7	206 205	16 .80 38	8.0 .66 31	14 .61 29	2.5 .06 3	84 1.68	--	6.0 .17	--	.1 0A	--			73 0	0.7 0.9				
10/14/81 1230	5050 5050	1.69 1650	11.0 105	55.4F 13.0C	7.9	194	--	--	--	--	--	--	--	--	--	1AF	--							
11/03/81 1340	5050 5050	2.66 2740	12.2 114	53.6F 12.0C	7.9	169	--	--	--	--	--	--	--	--	--	1AF	--							
12/08/81 1145	5050 5050	10.76 23700	11.7 103	49.1F 9.5C	7.4	115	--	--	--	--	--	--	--	--	--	11AF	--							
02/02/82 1140	5050 5050	7.52 11600	12.9 106	43.7F 6.5C	7.8 7.9	182 186	17 .85 45	8.0 .66 35	8.0 .35 18	1.4 .04 2	78 1.56	--	3.0 .08	--	.1 8A	--			76 0	0.4 0.5				
03/09/82 1050	5050 5050	11.38 26100	12.9 113	48.2F 9.0C	7.7	160	--	--	--	--	--	--	--	--	--	35AF	--							
04/13/82 1230	5050 5050	13.65 35500	12.8 110	47.3F 8.5C	7.6	137	--	--	--	--	--	--	--	--	--	35AF	--							

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH MCH	SAR ASAR	REM
						CA	MG	NA	K	CAC03	SO4	CL	NO3	TURB	SI02						
F3 1220.01					KLAMATH R A ORLEANS																
05/03/82	5050	10.05	11.7	55.4F	8.0 122	--	--	--	--	--	--	--	--	--	--						
1225	5050	21100	112	13.0C										74F	--						
06/08/82	5050	5.34	9.7	60.8F	7.9 128	--	--	--	--	--	--	--	--	--	--						
1145	5050	7630	99	16.0C										24F	--						
07/12/82	5050	3.94	9.1	72.5F	8.1 186	--	--	--	--	--	--	--	--	--	--						
1235	5050	4880	105	22.5C										14F	--						
08/02/82	5050	2.81	9.1	72.5F	8.1 187	--	--	--	--	--	--	--	--	--	--						
1210	5050	3110	105	22.5C										14F	--						
10/11/82	5050	2.57	8.6	60.8F	8.1 224	--	--	--	--	--	--	--	--	--	--						
1245	5050	2920	88	16.0C										24F	--						
12/05/82	5050	10.04	12.6	47.3F	8.2 130	--	--	--	--	--	--	--	--	--	--						
1325	5050	21100	109	8.5C										124F	--						
02/07/83	5050	8.10	13.2	42.8F	7.5 156	--	--	--	--	--	--	--	--	--	--						
1310	5050	13200	107	6.0C										134F	--						
04/03/83	5050	14.33	12.3	48.2F	8.0 146	--	--	--	--	--	--	--	--	--	--						
1330	0000	36900	107	9.0C										354F	--						
06/05/83	5050	10.30	11.2	58.1F	7.6 96	--	--	--	--	--	--	--	--	--	--						
1115	5050	19800	111	14.5C										144F	--						
08/08/83	5050	3.11	9.1	70.7F	7.9 159	14	7.0	8.0	--	68	--	3.0	--	.1	--			64	0.4		
1050	5050	2950	104	21.5C	7.6 159	.70	.58	.35		1.36	--	.08	--	3A	--			0	0.5		S
						43	36	21													
10/03/83	5050	2.77	10.9	61.7F	8.0 226	--	--	--	--	--	--	--	--	--	--						
1045	5050	2520	112	16.5C										14F	--						
12/05/83	5050	7.84	13.4	42.8F	7.5 152	12	7.0	8.0	--	64	--	3.0	--	.1	--			59	0.5		
1145	5050	12900	109	6.0C	7.5 156	.60	.58	.35		1.28	--	.08	--	5A	--			0	0.5		S
						39	38	23													

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	B TURB	F SIO2	TDS SUM	TH NCM	SAR ASAR		

F3		1220.01	KLAMATH R A ORLEANS								F05A2 CONTINUED									
02/06/84	5050	5.51	13.2	44.6F	7.5	175	15	8.0	10	--	75	--	3.0	--	.1	--		70	0.5	
1200	5050	7310	110	7.0C	7.8	188	.75	.66	.44		1.50		.08		5A	--		0	0.7	
							41	36	24											S
04/02/84	5050	8.95	12.4	50.0F	7.3	146	--	--	--	--	--	--	--	--	--	--				
1315	5050	17400	111	10.0C											7AF	--				
04/17/84	5050	9.85	12.2	50.0F	7.6	133	11	6.0	6.0	--	54	--	2.0	--	.0	--		52	0.4	
1100	5050		109	10.0C	7.5	131	.55	.49	.26		1.08		.06		4A	--		0	0.4	
							42	38	20											S
05/01/84	5050	7.50	11.8	51.8F	7.6	128	12	6.0	6.0	--	58	--	2.0	--	.0	--		54	0.4	
1215	5050	11900	108	11.0C	7.9	134	.60	.49	.26		1.16		.06		7A	--		0	0.4	
							44	36	19											S
05/16/84	5050		11.4	50.9F	7.3	115	--	--	--	--	--	--	--	--	--	--				
0500	5050		103	10.5C		112									5AF	--				
05/16/84	5050		11.4	50.9F	7.4	120	--	--	--	--	--	--	--	--	--	--				
0830	5050		103	10.9C		115									5AF	--				S
05/16/84	5050	8.05	11.5	53.6F	7.7	120	--	--	--	--	--	--	--	--	--	--				
1305	5050		108	12.0C		112									5AF	--				S
05/16/84	5050		11.4	55.4F	7.7	120	--	--	--	--	--	--	--	--	--	--				
1655	5050		109	13.0C		112									4AF	--				S
05/16/84	5050		10.9	53.6F	7.9	120	--	--	--	--	--	--	--	--	--	--				
2100	5050		102	12.0C		115									5AF	--				S
05/17/84	5050	7.92	11.0	53.6F	7.3	118	--	--	--	--	--	--	--	--	--	--				
0500	5050		103	12.0C		117									4AF	--				S
05/17/84	5050		11.3	54.0F	8.0	118	--	--	--	--	--	--	--	--	--	--				
0825	5050		106	12.2C		118									5AF	--				S
05/17/84	5050		10.8	57.2F	7.8	121	--	--	--	--	--	--	--	--	--	--				
1325	5050		106	14.0C		118									4AF	--				

55

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL	CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				REM
					LABORATORY PH	EC		CA	MG	NA	K	MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				

F3 1220.01					KLAMATH R A ORLEANS					F05A2 CONTINUED										
05/17/84	5050		11.1	57.2F	7.8	118	--	--	--	--	--	--	--	--	--					
1700	5050		109	14.0C		116										4AF	--		S	
05/17/84	5050		10.9	56.3F	8.0	122	--	--	--	--	--	--	--	--	--					
2150	5050		105	13.5C		129										5AF	--		S	
05/18/84	5050	8.08	10.9	55.8F	7.7	120	11	6.0	6.0	--	54	--	2.0	--	.0	--		52	0.4	
0830	5050		105	13.2C	7.8	125	.55	.49	.26		1.08		.06		5A	--		0	0.4	
							42	38	20										S	
06/04/84	5050	6.18	10.7	59.0F	7.6	105	--	--	--	--	--	--	--	--	--	--	--			
1115	5050	8930	107	15.0C											2AF	--				
07/17/84	5050	2.20	8.6	77.0F	7.7	183	--	--	--	--	--	--	--	--	--	--	--			
1040	5050	2630	104	25.0C											1AF	--				
08/20/84	5050	1.69	9.4	72.5F	8.1	189	--	--	--	--	--	--	--	--	--	--	--			
1025	5050	1930	109	22.5C											3AF	--				
08/27/84	5050	1.64	9.8	71.6F	8.1	194	--	--	--	--	--	--	--	--	--	--	--			
1345	5050		113	22.0C											2AF	--				
08/27/84	5050		9.7	32 F	8.0	201	--	--	--	--	--	--	--	--	--	--	--			
1800	5050		67	0 C											3AF	--				
08/27/84	5050		8.5	71.6F	8.3	200	--	--	--	--	--	--	--	--	--	--	--			
2115	5050		98	22.0C											2AF	--				
08/28/84	5050		8.5	69.8F	8.2	194	--	--	--	--	--	--	--	--	--	--	--			
0500	5050		96	21.0C											2AF	--				
08/28/84	5050		9.5	73.4F	8.2	196	--	--	--	--	--	--	--	--	--	--	--			
1340	5050		111	23.0C											2AF	--				
08/28/84	5050		9.2	72.5F	8.2	197	--	--	--	--	--	--	--	--	--	--	--			
1705	5050		107	22.5C											2AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. D DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR		

F3 1220.01			KLANATH R A ORLEANS						F05A2 CONTINUED											
08/28/84 2140	5050 5050		8.7 100	71.6F 22.0C	8.1 197	--	--	--	--	--	--	--	--	--	--					
														24F	--					
08/29/84 0440	5050 5050		8.3 94	69.8F 21.0C	8.2 196	--	--	--	--	--	--	--	--	--	--					
														24F	--					
08/29/84 0925	5050 5050		9.0 101	69.8F 21.0C	8.1 196 8.0 197	16 .80 40	8.0 .66 33	12 .52 26	--	78 1.56	--	4.0 .11	--	.1 14	--		73 0	0.6 0.8		
																				S
10/02/84 1345	5050 5050	1.98	11.1 116	62.6F 17.0C	8.2 229	--	--	--	--	--	--	--	--	--	--					
														14F	--					
10/02/84 1720	5050 5050		10.3 107	62.6F 17.0C	8.1 230	--	--	--	--	--	--	--	--	--	--					
														24F	--					
10/02/84 2110	5050 5050		9.5 99	62.6F 17.0C	8.3 231	--	--	--	--	--	--	--	--	--	--					
														24F	--					
10/03/84 0640	5050 5050		9.7 97	59.5F 15.3C	8.1 233	--	--	--	--	--	--	--	--	--	--					
														24F	--					
10/03/84 1005	5050 5050	1.97 2820	10.4 106	60.8F 16.0C	8.0 231 8.0 234	16 .80 33	10 .82 34	18 .78 33	--	90 1.80	--	6.0 .17	--	.1 24F	--		81 0	0.9 1.2		
																				S
10/22/84 1140	5050 5050	3.93	11.2 107	55.4F 13.0C	8.0 184 7.8 191	13 .65 34	8.0 .66 34	14 .61 32	--	74 1.48	--	4.0 .11	--	.0 7A	--		66 0	0.7 0.9		
																				S
02/26/85 1415	5050 5050	5.43 8280	12.7 108	46.0F 7.8C	7.8 148	--	--	--	--	--	--	--	--	--	--					
														34F	--					
02/26/85 1750	5050 5050		12.5 104	45.0F 7.2C	8.0 152	--	--	--	--	--	--	--	--	--	--					
														34F	--					
02/26/85 2200	5050 5050		12.1 100	44.1F 6.7C	7.8 151	--	--	--	--	--	--	--	--	--	--					
														64F	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR		

F3		1220.01	KLAMATH R A ORLEANS										F05A2 CONTINUED							
05/15/85	5050		10.3	54.0F	7.7	135	12	6.0	5.0	--	57	--	2.0	--	.0	--		54	0.3	
0605	5050		97	12.2C	7.9	126	.60	.49	.22		1.14		.06		1A	--		0	0.3	S
							46	37	17											
05/15/85	5050		10.5	55.0F	7.4	127	--	--	--	--	--	--	--	--	--	--				
0830	5050		100	12.8C											2AF	--				S
05/15/85	5050		10.9	57.9F	7.8	127	--	--	--	--	--	--	--	--	--	--				
1420	5050		107	14.4C											2AF	--				S
06/04/85	5050	3.59	10.6	60.8F	7.9	149	--	--	--	--	--	--	--	--	--	--				
1200	5050	5120	108	16.0C											1AF	--				S
08/12/85	5050	1.22	9.6	73.4F	8.4	188	--	--	--	--	--	--	--	--	--	--				
1400	5050		112	23.0C											2AF	--				S
08/12/85	5050		9.2	71.6F	8.4	188	--	--	--	--	--	--	--	--	--	--				
1745	5050		106	22.0C											3AF	--				S
08/12/85	5050		8.3	72.0F	8.3	188	--	--	--	--	--	--	--	--	--	--				
2010	5050		96	22.2C											3AF	--				S
08/13/85	5050		8.1	70.0F	7.9	187	--	--	--	--	--	--	--	--	--	--				
0540	5050		91	21.1C											3AF	--				S
08/13/85	5050	1.22	9.0	70.7F	8.4	185	--	--	--	--	--	--	--	--	--	--				
0855	5050		102	21.5C											3AF	--				S
08/13/85	5050		9.4	72.5F	8.6	186	--	--	--	--	--	--	--	--	--	--				
1430	5050		109	22.9C											3AF	--				S
08/13/85	5050		9.7	72.0F	8.6	186	--	--	--	--	--	--	--	--	--	--				
1800	5050		112	22.2C											4AF	--				S
08/13/85	5050		8.4	71.6F	8.3	185	--	--	--	--	--	--	--	--	--	--				
2040	5050		96	22.0C											3AF	--				S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM	
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAP		

F3		1220.01	KLAMATH R A DRLEANS								F05A2 CONTINUED										
08/14/85 0505	5050 5050		8.2 93	70.7F 21.5C	8.2 184		--	--	--	--	--	--	--	--	--	--					S
08/14/85 0920	5050 5050	1.22	8.9 102	71.6F 22.0C	8.1 184 8.3 187		15 .75 39	8.0 .66 34	12 .52 27	--	79 1.58	--	4.0 .11	--	.1 1A	--			70 0	0.6 0.8	S
08/14/85 1315	5050 5050		9.6 112	73.4F 23.0C	8.3 185		--	--	--	--	--	--	--	--	--	3AF	--				
09/30/85 1050	5050 5050	1.28	10.4 108	62.6F 17.0C	8.0 206		--	--	--	--	--	--	--	--	--	2AF	--				
12/02/85 1210	5050 5050	5.02	11.5 93	42.8F 6.0C	7.9 155		--	--	--	--	--	--	--	--	--	5AF	--				
01/22/86 1350	5050 5050	9.10 20400	12.7 104	43.7F 6.5C	7.5 135		--	--	--	--	--	--	--	--	--	6AF	--				
01/22/86 1830	5050 5050		11.0 90	43.7F 6.5C	135		--	--	--	--	--	--	--	--	--	6AF	--				
01/22/86 2200	5050 5050		12.8 106	44.1F 6.7C	8.0 135		--	--	--	--	--	--	--	--	--	5AF	--				
01/23/86 0615	5050 5050		12.5		7.7 128		--	--	--	--	--	--	--	--	--	6AF	--				
01/23/86 1045	5050 5050	10.70 24000	12.7 104	43.5F 6.4C	7.6 125		--	--	--	--	--	--	--	--	--	7AF	--				
03/31/86 1040	5050 5050	9.59	11.8 110	53.6F 12.0C	7.8 140		--	--	--	--	--	--	--	--	--	8AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCM	SAR ASAR	REM		
						CA	MG	NA	K	CAC03	SD4	CL	NO3	TURB	SI02	F	B						

F3		1300.00		KLAMATH R A SOMESBAR										F05A2									
04/10/51	5050	11.65	11.0	51.8F	7.6		--	--	5.5	--	50	--	2.5	--	--	--		51					
1130	5000	15300	101	11.0C	7.0	121			.24		1.00		.07		18E	--					S		
									19														
05/10/51	5050		10.4	55.0F	7.6		12	6.8	7.5	1.3	60	14	3.2	.0	.16	--		98	0.4				
1603	5000	11100	99	12.8C	7.6	149	.60	.56	.33	.03	1.20	.29	.09	.00		12.0	93	0	0.5				
							39	37	22	2	76	18	6	0									
06/19/51	5050		8.6	66.0F	7.6		--	--	--	--	57	--	1.2	--	--	--		50					
1130	5000	3460	93	18.9C	7.6	126					1.14		.03		25E	--					S		
07/18/51	5050		8.5	73.0F	8.0		--	--	--	--	75	--	.0	--	--	--		66					
1230	5000	1960	99	22.8C		179					1.50		.00		25E	--					S		
08/08/51	5050		8.7	75.0F	7.6		--	--	--	--	75	--	8.0	--	--	--		72					
1420	5000	1680	104	23.9C		178					1.50		.23		25E	--					S		
09/11/51	5050		9.2	68.0F	8.0		15	8.0	10	1.7	80	7.7	5.0	.9	.11	--		70	0.5				
1410	5000	1130	102	20.0C		181	.75	.66	.44	.04	1.60	.16	.14	.01		23.0	119	0	0.7				
							40	35	23	2	84	8	7	1									
10/13/51	5050		11.0	61.0F	7.5		--	--		12	--	81	--	6.0	--	--	--	70					
0900	5000	2360	113	16.1C		205			.52		1.62		.17		5E	--					S		
									27														
11/18/51	5050		12.6	45.0F	7.8		--	--	14	--	71	--	5.5	--	--	--		67					
1030	5000	3510	105	7.2C		180			.61		1.42		.16		0E	--					S		
									31														
12/12/51	5050		12.6	41.0F	7.6		--	--	--	--	59	--	3.0	--	--	--		56					
1230	5000	9100	100	5.0C		135					1.18		.08		25E	--					S		
02/07/52	5050		12.2	44.0F	7.8		--	--	4.8	--	65	--	2.8	--	--	--		66					
1245	5000	23200	101	6.7C		147			.21		1.30		.08		30E	--					S		
									14														
04/16/52	5050		12.0	50.0F	7.8		--	--	--	--	54	--	1.0	--	--	--		56					
1145	5000	22900	107	10.0C	7.1	128					1.08		.03		30E	--					S		
05/21/52	5050	14.50	10.8	55.4F	7.7		9.2	4.6	4.8	.9	43	8.4	2.2	.3	.08	.0		42	0.3				
0830	5000	23200	103	13.0C	7.2	104	.46	.38	.21	.02	.86	.17	.06	.00		22.0	78	0	0.3				
							43	36	20	2	79	16	6	0									

101

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM		
* * * * *																						
F3 1300.00		KLAMATH R A SOMESBAR										F05A2 CONTINUED										
06/18/52	5050		10.0	63.0F	8.3		--	--	--	--	51		--	2.0	--	--	--			49		
0830	5000	12000	105	17.2C	7.6	123					1.02		--	.06		4E	--				S	
07/08/52	5050		8.6	81.0F	7.4		--	--	--	--	57		--	3.0	--	--	--			52		
2010	5000	9020	109	27.2C		147					1.14		--	.08		2E	--				S	
08/06/52	5050		8.4	77.0F	8.1		--	--	--	--	74		--	3.0	--	--	--			66		
0903	5000	2850	102	25.0C	7.1	202					1.48		--	.08		1E	--				S	
09/17/52	5050		10.2	65.0F	8.3		--	--	--	--	84		--	5.0	--	--	--			72		
0830	5000	3700	109	18.3C		218					1.68		--	.14		--	--				S	
10/08/52	5050	6.94	10.5	61.0F	7.7		13	6.7	14	2.3	72		10	4.8	2.1	.08	.2		60	0.8		
0900	5000	3620	108	16.1C	7.6	181	.65	.55	.61	.06	1.44		.21	.14	.03		34.0	130	0	0.9		
							35	29	33	3	79		12	.8	2							
11/04/52	5050		12.7	56.0F	7.8		--	--	--	--	97		--	9.0	--	--	--			58		
1535	5000	3110	123	13.3C	7.8	225					1.94		--	.25		1E	--				S	
12/03/52	5050		13.2	42.0F	6.6		--	--	--	--	77		--	4.0	--	--	--			69		
0915	5000	3250	106	5.6C	7.8	200					1.54		--	.11		5E	--				S	
01/14/53	5050		13.3	44.0F	6.3		11	5.5	4.1	.7	52		--	2.2	--	--	--			50	0.3	
0900	5000	38000	110	6.7C		115	.55	.45	.18	.02	1.04		--	.06		--	--			0	0.2	
							46	38	15	2											S	
02/11/53	5050		13.6	40.0F	7.3		12	6.3	7.4	1.1	59		--	2.2	--	--	--			56	0.4	
0800	5000	21600	106	4.4C		141	.60	.52	.32	.03	1.18		--	.06		--	--			0	0.5	
							41	35	22	2											S	
03/11/53	5050		11.9	48.0F	7.4		13	6.8	8.2	--	64		--	3.2	--	.01	--			60	0.5	
0900	5000	10800	104	8.9C		151	.65	.56	.36		1.28		--	.09		--	--			0	0.5	
							41	36	23												S	
04/08/53	5050		12.7	45.0F	7.4		13	6.8	7.4	--	61		--	2.0	--	.03	--			60	0.4	
0815	5000	12100	106	7.2C		147	.65	.56	.32		1.22		--	.06		20E	--			0	0.5	
							42	37	21												S	
05/06/53	5050		10.7	56.0F	7.2		11	5.9	5.6	.9	53		8.1	1.5	.7	.03	.0		52	0.3		
0820	5000	17200	103	13.3C		124	.55	.49	.24	.02	1.06		.17	.04	.01	15E	13.0	79	0	0.3		
							42	38	18	2	83		13	.3	1							

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
											MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE							
											CA	MG	NA	K	CaCO3	SO4	CL	NO3				

F3		1300.00	KLAMATH R A SOMESBAR										F05A2 CONTINUED									
06/10/53 0900	5050 5000	17700	12.2 121	58.0F 14.4C	7.5		137	--	--	--	--	56 1.12	--	.0 .00	--	.04 20E	--		56			S
07/08/53 0820	5050 5000	10600	9.4 102	66.0F 18.9C	7.3		101	--	--	3.9 .17 15	--	46 .92	--	1.0 .03	--	.04 5E	--		47			S
08/05/53 0920	5050 5000	9740	9.6 115	76.0F 24.4C	7.5		148	14 .70 44	6.2 .51 32	7.8 .34 21	1.4 .04 3	66 1.32	--	3.5 .10	--	.00 0E	--		60 0	0.4 0.5		S
09/16/53 0900	5050 5000	4390	9.0 102	70.0F 21.1C	7.5		214	15 .75 34	8.6 .71 32	16 .70 32	2.3 .06 3	82 1.64 76	16 .33 15	5.5 .16 7	2.4 .04 2	.11 3E	.1 34.0	149	73 0	0.8 1.1		
10/07/53 0915	5050 5000	2240	10.4 103	58.0F 14.4C	6.4		215	16 .80 36	9.3 .76 34	14 .61 27	2.0 .05 2	91 1.82	--	5.0 .14	--	.06 2E	--		78 0	0.7 1.0		S
11/09/53 1615	5050 5000	4960	11.5 111	56.0F 13.3C	7.7		155	--	--	11 .48 28	--	67 1.34	--	4.0 .11	--	.04 4E	--		62			S
01/06/54 1500	5050 5000	8260	13.0 110	46.0F 7.8C	7.5		150	13 .65 43	6.1 .50 33	7.6 .33 22	1.2 .03 2	63 1.26	--	3.5 .10	--	.06 8E	--		58 0	0.4 0.5		S
02/03/54 1500	5050 5000	22400	12.5 112	50.0F 10.0C	7.4		128	12 .60 46	6.4 .53 41	3.4 .15 12	.8 .02 2	57 1.14	--	1.0 .03	--	.05 25E	--		56 0	0.2 0.2		S
03/07/54 1345	5050 5000	14400	11.8 108	52.0F 11.1C	8.2		145	13 .65 34	11 .90 48	7.4 .32 17	.8 .02 1	60 1.20	--	1.5 .04	--	.04 9E	--		78 18	0.4 0.4		S
04/07/54 1530	5050 5000	20500	12.2 121	58.0F 14.4C	7.5		118	11 .55 45	5.3 .44 36	4.5 .20 17	.7 .02 2	51 1.02	--	1.0 .03	--	.04 12E	--		49 0	0.3 0.3		S
05/05/54 1430	5050 5000	14800	10.3 107	62.0F 16.7C	7.7		106	11 .55 50	4.2 .35 32	4.1 .18 16	.8 .02 2	48 .96 86	5.0 .10 9	1.6 .05 4	.6 .01 1	.10 10E	.0 16.0	72	45 0	0.3 0.2		
05/28/54 1330	5050 5000	9080		72.0F 22.2C	8.8		122	14 .70 56	3.2 .26 21	5.7 .25 20	1.2 .03 2	56 1.12	4.8 .10	2.2 .06	--	.00 10E	--		48 0	0.4 0.4		S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH		SAR ASAR

F3		1300.00	KLAMATH R A SOMESBAR										F05A2 CONTINUED						
07/14/54	5050		8.5	68.0F	7.9		15	7.0	8.8	1.4	69	--	4.2	--	.00	--		66	0.5
0700	5000	2880	94	20.0C	174	.75	.58	.38	.04	1.38		.12		.0E	--		0	0.6	S
						43	33	22	2										
08/04/54	5050		8.5	70.0F	6.9		15	6.8	10	1.9	74	--	4.0	--	.08	--		63	0.5
0900	5000	2390	96	21.1C	179	.75	.56	.44	.05	1.48		.11		.0E	--		0	0.7	S
						42	31	24	3										
09/15/54	5050		9.8	64.0F	7.4		15	7.9	16	2.8	80	14	5.2	2.1	.11	.3		70	0.8
0930	5000	4350	104	17.8C	210	.75	.65	.70	.07	1.60	.29	.15	.03	2E	33.0	144	0	1.1	
						35	30	32	3	77	14	7	1						
10/06/54	5050		10.4	58.0F	7.2		15	8.4	17	2.3	85	--	5.0	--	.03	--		72	0.9
0900	5000	2610	103	14.4C	220	.75	.69	.74	.06	1.70		.14		3E	33.0		0	1.2	S
						33	31	33	3										
11/10/54	5050		12.0	54.0F	7.3		13	6.2	9.9	1.8	66	--	3.5	--	.10	--		58	0.6
1345	5000	5150	113	12.2C	155	.65	.51	.43	.05	1.32		.10		3E	--		0	0.6	S
						40	31	26	3										
12/08/54	5050		14.2		7.8		12	6.6	6.6	1.2	61	--	2.8	--	.07	--		57	0.4
0830	5000	6660			142	.60	.54	.29	.03	1.22		.08		5E	--		0	0.4	S
						41	37	20	2										
01/05/55	5050		14.0	39.0F	7.2		13	6.3	5.3	.9	62	--	3.8	--	.08	--		58	0.3
0850	5000	5640	107	3.9C	138	.65	.52	.23	.02	1.24		.11		2E	--		0	0.3	S
						46	37	16	1										
02/09/55	5050		13.0	44.0F	7.7		16	8.3	9.0	1.2	78	--	4.8	--	.06	--		74	0.5
0900	5000	5980	107	6.7C	176	.80	.68	.39	.03	1.56		.14		3E	--		0	0.6	S
						42	36	21	2										
03/12/55	5050		12.2	45.0F	7.4		16	8.5	9.4	1.6	75	--	4.2	--	.07	--		75	0.5
1045	5000	4370	102	7.2C	181	.80	.70	.41	.04	1.50		.12		2E	--		0	0.6	S
						41	36	21	2										
04/06/55	5050		12.0	47.0F	8.1		11	9.9	7.2	1.1	67	--	3.3	--	.04	--		68	0.4
0800	5000	4680	103	8.3C	162	.55	.81	.31	.03	1.34		.09		4E	--		1	0.5	S
						32	48	18	2										
05/09/55	5050		10.4	62.0F	6.8		11	3.1	3.6	.9	43	5.5	1.5	.5	.09	.0		40	0.2
2000	5000	9850	108	16.7C	95	.55	.25	.16	.02	.86	.11	.04	.01	2E	5.3	57	0	0.2	
						56	26	16	2	84	11	4	1						
06/08/55	5050		9.4	65.0F	7.5		11	2.6	4.1	.8	41	--	2.0	--	.04	--		38	0.3
0830	5000	7050	101	18.3C	93	.55	.21	.18	.02	.82		.06		1E	--		0	0.2	S
						57	22	19	2										

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CACO3	PERCENT REACTANCE VALUE			TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR		
											SO4	CL	NO3							
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *		
F3 1300.00		KLAMATH R A SOMESBAR										F05A2 CONTINUED								
07/12/55	5050		9.2	74.0F	7.3		14	6.6	6.6	1.2	67	--	4.0	--	.15	--		62	0.4	
1945	5000	2960	108	23.3C		149	.70	.54	.29	.03	1.34		.11		1E	--		0	0.4	S
							45	35	19	2										
08/02/55	5050		9.2	76.0F	8.4		14	6.3	8.4	1.8	71	--	3.0	--	.07	--		61	0.5	
1315	5000	1280	111	24.4C		108	.70	.52	.37	.05	1.42		.08		1E	--		0	0.6	S
							43	32	23	3										
09/14/55	5050		9.4	62.0F			15	7.9	12	2.1	81	11	5.7	.9	.09	.4		70	0.6	
0905	5000	1670	97	16.7C		193	.75	.65	.52	.05	1.62	.23	.16	.01	2E	26.0	129	0	0.8	
							38	33	26	3	80	11	8	0						
10/05/55	5050		9.7	58.0F	7.2		15	9.7	15	2.2	87	--	5.5	--	.12	--		77	0.7	
0800	5000	2010	96	14.4C		216	.75	.80	.65	.06	1.74		.16		4E	--		0	1.0	S
							33	35	29	3										
11/16/55	5050		12.4	40.0F	6.9		16	8.0	13	2.0	83	--	6.2	--	.15	--		73	0.7	
0850	5000	2430	97	4.4C		199	.80	.66	.57	.05	1.66		.17		3E	--		0	0.9	S
							38	32	27	2										
12/07/55	5050		11.0	48.0F	7.0		12	5.2	6.1	1.1	53	--	2.0	--	.00	--		51	0.4	
0810	5000	13700	96	8.9C		127	.60	.43	.27	.03	1.06		.06		17E	--		0	0.4	S
							45	32	20	2										
04/03/56	5050		12.0	51.0F	8.0		13	6.9	7.2	1.4	71	--	1.0	--	.06	--		61	0.4	
1230	5000	19100	109	10.5C		148	.65	.57	.31	.04	1.42		.03		30E	--		0	0.5	S
							41	36	20	3										
05/09/56	5050		10.6	56.0F			13	5.2	6.5	1.2	62	8.0	.6	.5	.00	.3		54	0.4	
1300	5000	19800	102	13.3C	7.1	128	.65	.43	.28	.03	1.24	.17	.02	.01	9E	16.0	90	0	0.4	
							47	31	20	2	86	12	1	1						
06/13/56	5050		10.2	65.0F	6.8		11	5.0	6.3	1.4	55	--	1.5	--	.00	--		48	0.4	
1100	5000	13300	109	18.3C		121	.55	.41	.27	.04	1.10		.04		5E	--		0	0.4	S
							43	32	21	3										
07/05/56	5050		9.0	72.0F	8.2		16	7.8	12	2.1	73	--	3.5	--	.108	--		72	0.6	
1500	5000	8600	104	22.2C		192	.80	.64	.52	.05	1.46		.10		2E	--		0	0.8	S
							40	32	26	2										
08/08/56	5050		8.6	73.0F	7.1		20	9.8	13	1.9	93	--	5.0	--	.03	--		90	0.6	
1530	5000	4250	100	22.8C		222	1.00	.81	.57	.05	1.86		.14		20E	--		0	0.9	S
							41	33	23	2										
09/12/56	5050		10.4	69.0F	7.1		21	11	22	3.4	102	35	7.0	2.1	.14	.0		98	1.0	
1630	5000	2530	116	20.5C		289	1.05	.90	.96	.09	2.04	.73	.20	.03	1E	29.0	192	0	1.5	
							35	30	32	3	68	24	7	1						

105

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR		

F3		1300.00	KLAMATH R A SOMESBAR										F05A2 CONTINUED							
10/01/56	5050		10.3	69.0F	7.5		19	10	18	2.8	93	--	5.7	--	.06	--		89	0.8	
1720	5000	1870	115	20.5C		255	.95	.82	.78	.07	1.86	--	.16	--	3E	--		0	1.2	
							36	31	30	3									S	
11/01/56	5050		12.8	49.0F	7.2		14	7.5	8.6	1.4	67	--	3.5	--	.05	--		66	0.5	
1240	5000	9410	113	9.4C		166	.70	.62	.37	.04	1.34	--	.10	--	35E	--		0	0.6	
							40	36	21	2									S	
02/06/57	5050		13.4	46.0F	7.6		--	--	--	--	--	--	--	--	--	--				
1440	0000	5150	114	7.8C											--					
05/10/57	5050		10.8	56.0F	6.9		12	5.8	7.3	1.4	57	11	2.0	.6	.00	.2	54	0.4		
1500	5000	10800	104	13.3C		137	.60	.48	.32	.04	1.14	.23	.06	.01	2E	16.0	90	0	0.5	
							42	33	22	3	79	16	4	1						
06/05/57	5050		9.6	68.0F	7.3		13	7.4	5.0	1.1	54	--	2.5	--	.00	--		63	0.3	
1650	5000	9280	106	20.0C		124	.65	.61	.22	.03	1.08	--	.07	--	1E	--		9	0.3	
							43	40	15	2									S	
07/10/57	5050		9.0	75.0F	8.4		--	--	8.2	--	71	--	3.3	--	.07	--		65		
1330	5000	2940	107	23.9C		162			.36		1.42	--	.09	--	1E	--				
									22										S	
08/07/57	5050		10.2	70.0F	7.6		--	--	12	--	72	--	4.0	--	.03	--		70		
1600	5000	2300	115	21.1C		175			.52		1.44	--	.11	--	1E	--				
									27										S	
09/12/57	5050		10.2	72.0F	7.9		23	4.0	15	2.9	89	11	4.3	2.0	.19	.2	74	0.8		
1230	5000	2830	118	22.2C		196	1.15	.33	.65	.07	1.78	.23	.12	.03	3E	36.0	152	0	1.0	
							52	15	30	3	82	11	6	1						
10/16/57	5050		11.4	55.0F	7.9		--	--	11	--	72	--	4.0	--	.10	--		63		
1450	5000	9000	109	12.8C		175			.48		1.44	--	.11	--	3E	--				
									28										S	
11/06/57	5050		11.6	48.0F	7.2		--	--	16	--	85	--	6.0	--	.00	--		77		
1300	5000	4440	101	8.9C		218			.70		1.70	--	.17	--	4E	--				
									31										S	
01/08/58	5050		7.2	44.0F	7.5		--	--	9.3	--	69	--	3.0	--	.10	--		64		
1345	5000	12000	99	6.7C		158			.40		1.38	--	.08	--	10E	--				
									24										S	
02/06/58	5050		12.8	48.0F	7.3		--	--	5.5	--	74	--	2.8	--	.08	--		72		
1400	5000	23300	112	8.9C		155			.24		1.48	--	.08	--	20E	--				
									14										S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	ASAR	
* * * * *																			
F3 1300.00					KLAMATH R A SOMESBAR					F05A2 CONTINUED									
03/12/58 1310	5050 5000	19100	14.0 119	46.0F 7.8C	7.6 154	--	--	7.6 .33 20	--	67 1.34	--	2.5 .07	--	.01 40E	--		64		S
04/02/58 1205	5050 5000	20600	12.0 103	47.0F 8.3C	7.9 147	--	--	6.0 .26 18	--	67 1.34	--	3.0 .08	--	.00 40E	--		60		S
05/07/58 1245	5050 5000	19100	10.6 106	59.0F 15.0C	8.0 101	10 .50 49	4.4 .36 35	3.3 .14 14	1.2 .03 3	46 .92 89	3.5 .07 7	1.0 .03 3	.7 .01 1	.00 20E	.0 14.0	66	43 0	0.2 0.2	
06/04/58 1200	5050 5000	15400	9.2 95	62.0F 16.7C	8.1 113	--	--	5.2 .23 20	--	52 1.04	--	.8 .02	--	.0 10E	--		45		S
07/09/58 1315	5050 5000	12200	8.4 100	75.0F 23.9C	7.6 157	--	--	8.6 .37 24	--	69 1.38	--	4.4 .12	--	.0 1E	--		60		S
08/06/58 1200	5050 5000	5600	8.6 106	78.0F 25.5C	8.5 206	--	--	14 .61 29	--	85 1.70	--	5.0 .14	--	.1 3E	--		74		S
09/10/58 1215	5050 5000	4400	8.2 93	70.0F 21.1C	8.6 206	18 .90 43	6.6 .54 26	14 .61 29	2.3 .06 3	86 1.72 83	5.8 .12 6	7.5 .21 10	1.0 .02 1	.3 5E	.1 20.0	127	72 0	0.7 1.0	
10/07/58 1500	5050 5000	5400	11.4 126	68.0F 20.0C	8.4 178	--	--	10 .44 24	--	79 1.58	--	4.5 .13	--	.0 2E	--		69		S
11/12/58 1110	5050 5000	6.25 8350	11.3 103	51.1F 10.6C	8.3 182	--	--	12 .52 28	--	77 1.54	--	5.5 .16	--	.1 5E	--		66		S
12/02/58 0950	5050 5000	6.55 9550	12.3 103	45.0F 7.2C	7.4 216	--	--	17 .74 33	--	82 1.64	--	5.8 .16	--	.0 1E	--		74		S
01/20/59 0940	5050 5000	13.3 10700	13.3 105	41.0F 5.0C	7.3 148	--	--	7.6 .33 21	--	59 1.18	--	3.8 .11	--	.0 25E	--		62		S
02/03/59 1010	5050 5000	9.7 11900	13.1 104	41.0F 5.0C	7.6 142	--	--	5.6 .24 18	--	61 1.22	--	3.5 .10	--	.0 4E	--		56		S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
							CA	MG	NA	K	CAC03	SD4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH		

F3 1300.00		KLAMATH R A SOMESBAR										F05A2 CONTINUED								
03/05/59	5050		11.9	46.9F	7.4		--	--	5.8	--	62		2.8	--	.0			66		
0930	5000	12200	102	8.3C	7.5	149			.25		1.24		.08		35E	--			S	
									16											
04/08/59	5050		11.3	50.0F	7.4		--	--	1.8	--	49		2.5	--	.0			58		
1100	5000	12000	101	10.0C	7.9	108			.08		.98		.07		40E	--			S	
									6											
05/06/59	5050	7.64	10.9	53.1F	7.4		13	7.2	5.2	.9	61	8.6	3.8	.5	.0	.0	62	0.3		
1030	5000	6360	101	11.7C	7.9	141	.65	.59	.23	.02	1.22	.18	.11	.01	100E	15.0	1	0.3		
							44	40	15	1	80	12	7	1						
06/03/59	5050	7.10	10.1	60.1F	7.5		--	--	5.8	--	64		3.0	--	.0			58		
0715	5000	5310	102	15.6C	7.9	134			.25		1.28		.08		1E	--			S	
									18											
07/15/59	5050	5.29	8.1	78.1F	8.0		--	--	10	--	74		4.8	--	.1			66		
1545	5000	2740	99	25.6C	8.3	162			.44		1.48		.14		1E	--			S	
									25											
08/06/59	5050	5.12	8.3	75.0F	7.8		--	--	7.4	--	82		4.8	--	.2			86		
1015	5000	2540	99	23.9C	8.1	194			.32		1.64		.14		5E	--			S	
									16											
09/10/59	5050	5.20	8.7	73.0F	7.7		17	8.1	16	2.3	90	11	6.0	2.0	.1	.2	76	0.8		
0850	5000	2630	102	22.8C	7.7	208	.85	.67	.70	.06	1.80	.23	.17	.03	15E	32.0	0	1.1		
							37	29	31	3	81	10	8	1						
10/08/59	5050	5.89	10.2	56.5F	7.9		--	--	15	--	77		5.5	--	.1			65		
1545	5000	3510	99	13.6C	7.8	187			.65		1.54		.16		4E	--			S	
									33											
11/06/59	5050	4.96	11.6	46.0F	7.3		--	--	14	--	74		6.2	--	.0			66		
0800	5000	2370	98	7.8C	7.5	188			.61		1.48		.17		15E	--			S	
									32											
01/14/60	5050	5.30	13.3	37.9F	7.5		--	--	11	--	75		6.0	--	.1			70		
1300	5000	3140	100	3.3C	7.6	174			.48		1.50		.17		3E	--			S	
									26											
02/12/60	5050	10.3	12.4	44.1F	7.3		--	--	5.0	--	59		3.8	--	.0			60		
1115	5000	13000	102	6.7C	7.6	138			.22		1.18		.11		60E	--			S	
									15											
03/10/60	5050	11.05	12.2	45.0F	7.3		--	--	4.1	--	52		2.5	--	.1			56		
1505	5000	15200	102	7.2C	7.6	127			.18		1.04		.07		60E	--			S	
									14											

108

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	ASAR	

F3		1300.00	KLAMATH R A SOMESBAR				F05A2 CONTINUED												
04/07/60	5050	11.61	10.8	52.0F	7.4	--	--	4.2	--	33	--	2.8	--	.0	--		53		
1325	5000	16600	99	11.1C	7.4	119		.18		.66		.08		15E	--				S
								15											
05/02/60	5050		8.6	55.9F				13	6.9	5.7	1.3	62	9.0	3.0	.0	.0	.1	61	0.3
1730	5000	5740	83	13.3C	7.8	148		.65	.57	.25	.03	1.24	.19	.08	.00	1E	19.0	95	0
								43	38	17	2	82	13	5	0				0.4
06/09/60	5050	8.25	9.9	59.0F	7.3			1.9	--	41	--	1.6	--	.0	--		39		
1235	5000	8420	99	15.0C	7.6	90		.08		.82		.05		15E	--				
								9											S
07/14/60	5050	4.76	8.7	73.9F	7.9			6.4	--	69	--	5.5	--	.0	--		63		
1430	5000	2160	102	23.3C	8.0	148		.28		1.38		.16		1E	--				S
								18											
08/04/60	5050	4.38	8.7	73.9F	8.1			9.1	--	77	--	4.0	--	.1	--		66		
1415	5000	1800	102	23.3C	7.9	168		.40		1.54		.11		2E	--				S
								23											
09/15/60	5050	4.18	9.0	69.1F	8.1			16	7.3	12	2.1	79	9.0	7.5	1.1	.2	.2	70	0.6
1405	5000	1630	101	20.6C	7.8	181		.80	.60	.52	.05	1.58	.19	.21	.02	5E	33.0	136	0
								41	30	26	3	79	10	11	1				0.8
10/13/60	5050	5.21	10.5	57.0F	7.7			13	--	79	--	5.2	--	.1	--		66		
1245	5000	2640	103	13.9C	8.0	187		.57		1.58		.15		5E	--				S
								30											
11/10/60	5050	4.55	11.0	50.0F	7.7			17	--	85	--	7.2	--	.1	--		75		
1430	5000	1960	98	10.0C	8.0	227		.74		1.70		.20		10E	--				S
								33											
12/08/60	5050	7.67	13.1	39.9F	7.7			14	--	78	--	4.8	--	.0	--		71		
1220	5000	6420	102	4.4C	7.8	204		.61		1.56		.14		20E	--				S
								30											
01/12/61	5050	6.50	14.5	44.1F	7.6			11	--	80	--	4.8	--	.1	--		70		
1115	5000	4380	120	6.7C	7.8	182		.48		1.60		.17		15E	--				S
								26											
03/09/61	5050	9.52	11.8	45.0F	7.5			7.4	--	66	--	1.2	--	.1	--		65		
1000	5000	11000	99	7.2C	8.1	162		.32		1.32		.03		15E	--				S
								20											
04/06/61	5050	11.36	11.6	50.0F	7.5			2.0	--	52	--	2.6	--	.1	--		54		
1200	5000	15900	104	10.0C	7.9	120		.09		1.04		.07		9E	--				S
								8											

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
							CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2						
* * * * *																						
F3		1300.00	KLAMATH R A SOMESRAR										F05A2 CONTINUED									
05/08/61	5050	8.53	11.0	54.0F	7.9		12	6.8	5.3	1.1	49	9.6	7.0	.2	.1	.1		58	0.3			
1645	5000	8700	104	12.2C	7.9	139	.60	.56	.23	.03	.98	.20	.20	.00	1E	18.0	89	9	0.3			
							42	39	16	2	71	14	14	0								
06/07/61	5050	9.10	10.9	57.9F	7.7		--	--	1.6	--	46	--	3.0	--	.0	--		46				
1800	5000	9910	108	14.4C	8.0	106			.07		.92		.08		3E	--						
									7											S		
07/06/61	5050	5.47	9.4	68.0F	7.9		--	--	8.6	--	66	--	3.5	--	.0	--		66				
1245	5000	2690	104	20.0C	8.1	163			.37		1.32		.10		4E	--				S		
									22													
08/03/61	5050	4.70	8.4	75.9F	7.9		--	--	10	--	75	--	3.1	--	.1	--		63				
1345	5000	1780	101	24.4C	7.9	165			.44		1.50		.09		--	--				S		
									26													
09/06/61	5050	4.19	9.1	70.0F	8.1		16	8.3	11	1.6	82	8.0	6.4	.2	.1	.0		74	0.6			
1330	5000	1360	103	21.1C	8.3	183	.80	.68	.48	.04	1.64	.17	.18	.00	5E	21.0	122	0	0.7			
							40	34	24	2	.82	9	9	0								
10/04/61	5050	4.59	9.6	64.9F	7.9		--	--	14	--	94	--	6.8	--	.2	--		79				
1340	5000	1680	103	18.3C	8.2	213			.61		1.88		.19		6E	--				S		
									28													
11/08/61	5050	6.40	10.4	48.9F	7.6		--	--	14	--	75	--	1.9	--	.0	--		64				
1320	5000	4000	92	9.4C	7.8	190			.61		1.50		.05		9E	--				S		
									32													
12/06/61	5050	7.00	12.2	45.0F	7.6		--	--	13	--	75	--	4.2	--	.1	--		71				
1400	5000	5050	102	7.2C	7.8	196			.57		1.50		.12		4E	--				S		
									29													
01/10/62	5050	7.08	12.3	41.0F	7.3		--	--	12	--	71	--	4.8	--	.1	--		69				
1310	5000	5200	97	5.0C	7.9	179			.52		1.42		.14		2E	--				S		
									27													
02/08/62	5050	11.77	12.2	44.1F	7.3		--	--	4.8	--	51	--	2.8	--	.1	--		49				
1140	5000	16950	101	6.7C	7.8	114			.21		1.02		.08		60E	--				S		
									18													
03/08/62	5050	8.64	12.1	46.0F	7.5		--	--	6.5	--	69	--	2.5	--	.0	--		70				
1305	5000	8630	103	7.8C	8.0	159			.28		1.38		.07		10E	--				S		
									17													
04/05/62	5050	10.60	11.4	50.0F	7.6		--	--	5.7	--	57	--	2.5	--	.0	--		56				
1020	5000	13820	102	10.0C	7.8	138			.25		1.14		.07		15E	--				S		
									18													

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR		REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	ASAR	ASAR	
*****																				*****
		F3 1300.00	KLAMATH R A SOMESBAR				F05A2 CONTINUED													
05/08/62	5050	9.23	10.9	55.0F	7.5	10	4.6	5.0	.9	44	9.0	1.8	.0	.0	.1		44	0.3		
1135	5000	10200	104	12.8C	7.9	112	.50	.38	.22	.02	.88	.19	.05	.00	9E	13.0	71	0	0.3	
							45	34	20	2	79	17	4	0						
06/04/62	5050	7.17	10.1	57.9F	7.2	--	--	6.8	--	55	--	3.0	--	.0	--		56			
1430	5000	5520	100	14.4C	7.9	138	--	.30	--	1.10	--	.08	--	2E	--					
								21												S
07/09/62	5050	4.82	8.2	73.0F	8.1	--	--	9.2	--	73	--	4.1	--	.1	--		69			
1445	5000	1900	96	22.8C	8.2	177	--	.40	--	1.46	--	.12	--	1E	--					S
								22												
08/06/62	5050	4.43	9.0	70.0F	8.2	--	--	13	--	80	--	5.0	--	.1	--		78			
1400	5000	1730	102	21.1C	8.0	192	--	.57	--	1.60	--	.14	--	2E	--					S
								27												
09/04/62	5050	4.54	8.9	73.0F	8.2	16	8.8	13	2.0	84	13	6.4	.7	.0	.0	129	76	0.6		
1440	5000	1850	104	22.8C	8.0	195	.80	.72	.57	.05	1.68	.27	.18	.01	15E	20.0	130	0	0.9	
							37	34	27	2	79	13	8	0						
10/08/62	5050	6.34	10.9	57.9F	7.8	--	--	11	--	76	--	5.2	--	.1	--		67			
1325	5000	4140	108	14.4C	7.8	178	--	.48	--	1.52	--	.15	--	8E	--					S
								26												
11/05/62	5050	6.51	7.7	55.9F	7.9	--	--	14	--	84	--	5.9	--	.0	--		70			
1345	5000	4380	74	13.3C	8.1	198	--	.61	--	1.68	--	.17	--	5E	--					S
								30												
12/03/62	5050	26.70	12.7	48.0F	7.3	--	--	3.7	--	41	--	1.0	--	.0	--		44			
1250	5000	59100	111	8.9C	7.5	95	--	.16	--	.82	--	.03	--	180E	--					S
								15												
01/07/63	5050	7.34	13.4	41.0F	7.5	--	--	13	--	82	--	5.0	--	.1	--		74			
1130	5000	6430	106	5.0C	7.9	199	--	.57	--	1.64	--	.14	--	5E	--					S
								28												
02/05/63	5050	20.36	12.8	46.9F	7.3	--	--	4.0	--	49	--	2.9	--	.0	--		46			
1245	5000	45700	110	8.3C	7.7	106	--	.17	--	.98	--	.08	--	30E	--					S
								16												
03/12/63	5050	7.37	12.5	48.0F	7.8	--	--	8.9	--	84	--	4.8	--	.0	--		78			
1200	5000	6480	109	8.9C	8.2	194	--	.39	--	1.68	--	.14	--	6E	--					S
								20												
04/01/63	5050	11.27	12.6	46.9F	7.4	--	--	5.0	--	58	--	1.5	--	.0	--		58			
1225	5000	15600	108	8.3C	8.0	136	--	.22	--	1.16	--	.04	--	10E	--					S
								16												

111

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	B TURB	F SIO2								
* * * * *																							
F3		1300.00		KLAMATH R A SOMESBAR										F05A2 CONTINUED									
05/06/63	5050	15.30	12.1	50.0F	7.5		9.0	4.9	3.7	.7	45	5.0	1.0	.8	.1	.0		70	42	0.2	E		
1145	5000	26500	108	10.0C	8.0	98	.45	.40	.16	.02	.90	.10	.03	.01	15E	13.0		65	0	0.2			
							44	39	16	2	87	10	3	1									
06/10/63	5050	7.84	9.9	63.0F	7.6		--	--	5.5	--	66	--	3.2	--	.0	--			61				
1150	5000	6840	104	17.2C	8.3	140			.24		1.32		.09		1E	--					S		
									16														
07/16/63	5050	5.74	9.2	70.0F	8.1		--	--	7.9	--	84	--	5.5	--	.0	--			76				
1105	5000	2550	104	21.1C	8.3	173			.34		1.68		.16		2E	--					S		
									18														
08/12/63	5050	5.45	9.1	73.0F	7.9		--	--	10	--	82	--	9.6	--	.0	--			75				
1150	5000	2190	106	22.8C	8.2	188			.44		1.64		.16		1E	--					S		
									23														
09/03/63	5050	5.49	9.2	71.1F	8.0		16	9.4	12	1.9	91	9.0	6.5	.5	.1	.2		124	78	0.6			
1250	5000	2240	105	21.7C	8.5	202	.80	.77	.52	.05	1.82	.19	.18	.01	5E	15.0		125	0	0.8			
							37	36	24	2	83	9	8	0									
10/01/63	5050	5.72	10.0	66.0F	8.2		--	--	13	--	86	--	5.2	--	.1	--			73				
1200	5000	2500	108	18.9C	7.9	196			.57		1.72		.15		2E	--					S		
									28														
11/12/63	5050	8.43	11.1	52.0F	7.9		--	--	7.0	--	62	--	3.0	--	.0	--			60				
1300	5000	8050	102	11.1C	8.0	154			.30		1.24		.08		3E	--					S		
									20														
12/09/63	5050	8.08	12.7	44.1F	7.5		--	--	11	--	70	--	3.0	--	.1	--			65				
1515	5000	8100	105	6.7C	8.1	179			.48		1.40		.08		1E	--					S		
									27														
01/16/64	5050	8.43	13.2	42.1F	7.5		--	--	7.2	--	64	--	3.5	--	.1	--			63				
1215	5000	8220	106	5.6C	8.3	147			.31		1.28		.10		3E	--					S		
									20														
02/10/64	5050		13.5	43.0F	7.6		--	--	6.6	--	64	--	3.2	--	.0	--			62				
1245	5000	11100	110	6.1C	8.2	147			.29		1.28		.09		4E	--					S		
									19														
03/09/64	5050	8.30	12.9	45.0F	7.7		--	--	7.4	--	71	--	2.5	--	.2	--			68				
1200	5000	6800	108	7.2C	8.4	163			.32		1.42		.07		1E	--					S		
									19														
04/13/64	5050		12.0	51.1F	7.8		--	--	9.0	--	66	--	2.5	--	.0	--			72				
1320	5000	7800	109	10.6C	8.2	177			.39		1.32		.07		6E	--					S		
									21														

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	VALUE NO3	TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR			

F3		1300.00	KLAMATH R A SOMESBAR										F05A2 CONTINUED									
05/11/64	5050		11.0	55.9F	8.1		11	5.5	4.5	.8	51	5.0	1.0	1.8	.0	.0	74	50	0.3			
1245	5003	8780	106	13.3C	8.1	114	.55	.45	.20	.02	1.02	.10	.03	.03	2E	13.0	73	0	0.3			
							45	37	16	2	86	8	3	3								
06/02/64	5050		10.6	59.0F	7.7		--	--	3.9	--	48	--	1.0	--	.0	--		46				
1235	5000	7020	106	15.0C	8.2	107			.17		.96		.03		2E	--						
									16											S		
F3		1302.00	KLAMATH R AB SALMON RIVER										F05A2									
04/17/84	5050		12.3	51.8F	7.6	143	12	7.0	8.0	--	59	--	2.0	--	.1	--		59	0.5			
1015	5050		113	11.0C	7.8	144	.60	.58	.35		1.18		.06		11A	--		0	0.5			
							39	38	23											S		
05/16/84	5050		11.2	51.8F	7.6	128	--	--	--	--	--	--	--	--	--	--						
0425	5050		103	11.0C		130									5AF	--						
05/16/84	5050		11.0	53.1F	7.5		--	--	--	--	--	--	--	--	--	--						
0800	5050		103	11.7C		129									6AF	--						
05/16/84	5050		11.5	55.4F	7.8	137	--	--	--	--	--	--	--	--	--	--						
1235	5050		110	13.0C		126									5AF	--						
05/16/84	5050		11.7	55.4F	7.8	139	--	--	--	--	--	--	--	--	--	--						
1640	5050		112	13.0C		130									5AF	--				S		
05/16/84	5050		11.1	55.4F	8.1	135	--	--	--	--	--	--	--	--	--	--						
2015	5050		107	13.0C		134									5AF	--				S		
05/17/84	5050		11.0	54.5F	7.7	135	--	--	--	--	--	--	--	--	--	--						
0425	5050		104	12.5C		133									5AF	--				S		
05/17/84	5050		11.4	55.0F		125	--	--	--	--	--	--	--	--	--	--						
0745	5050		109	12.8C		134									5AF	--				S		
05/17/84	5050		12.0	58.1F	7.8		--	--	--	--	--	--	--	--	--	--						
1225	5050		119	14.5C		134									5AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH MCH		

F3 1302.00					KLAMATH R AB SALMON RIVER					F05A2 CONTINUED									
05/17/84 1625	5050 5050		11.2 112	59.0F 15.0C	7.9 131 132	--	--	--	--	--	--	--	--	--	3AF	--			
05/17/84 2100	5050 5050		10.7 105	57.2F 14.0C	8.0 138 129	--	--	--	--	--	--	--	--	--	5AF	--			
05/18/84 0740	5050 5050		11.1 109	57.2F 14.0C	7.7 135 138	11 .55 41	6.0 .49 37	7.0 .30 22	--	59 1.18	--	2.0 .06	--	.1 3A	--		52 0	0.4 0.4	S
08/27/84 1300	5050 5050		9.3 107	71.6F 22.0C	8.1 205	--	--	--	--	--	--	--	--	3AF	--				
08/27/84 1720	5050 5050		10.1 114	69.8F 21.0C	8.4 202	--	--	--	--	--	--	--	--	2AF	--				
08/27/84 2035	5050 5050		9.0		8.2 201	--	--	--	--	--	--	--	--	2AF	--				
08/28/84 0420	5050 5050		8.8 97	67.1F 19.5C	8.2	--	--	--	--	--	--	--	--	2AF	--				
08/28/84 0850	5050 5050		9.1 102	68.9F 20.5C	8.0 202	--	--	--	--	--	--	--	--	3AF	--				
08/28/84 1250	5050 5050		9.1 107	73.4F 23.0C	8.2 203	--	--	--	--	--	--	--	--	2AF	--				
08/28/84 1630	5050 5050		8.8 104	73.9F 23.3C	8.2 203	--	--	--	--	--	--	--	--	3AF	--				
08/28/84 2050	5050 5050		8.8 101	71.6F 22.0C	8.4 205	--	--	--	--	--	--	--	--	3AF	--				
08/29/84 0410	5050 5050		9.0 102	69.8F 21.0C	8.2 204	--	--	--	--	--	--	--	--	3AF	--				

114

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SI02	TDS SUM	TH NCH	SAR ASAR		

F3 1302.00			KLAMATH R AB SALMON RIVER										F05A2 CONTINUED							
08/29/84 0845	5050 5050		9.5 105	68.0F 20.0C	7.9 204	--	--	--	--	--	--	--	--	--	1AF	--				
10/02/84 1255	5050 5050		10.2 109	64.4F 18.0C	8.2 238	--	--	--	--	--	--	--	--	--	2AF	--				
10/02/84 1750	5050 5050		10.0 106	63.5F 17.5C	8.1 238	--	--	--	--	--	--	--	--	--	1AF	--				
10/02/84 2035	5050 5050		10.2 105	61.7F 16.5C	8.4 239	--	--	--	--	--	--	--	--	--	2AF	--				
10/03/84 0540	5050 5050		9.9 100	59.9F 15.5C	8.1 239	--	--	--	--	--	--	--	--	--	2AF	--				
10/03/84 0930	5050 5050		10.4 106	60.8F 16.0C	7.9 239 8.0 243	15 .75 31	10 .82 34	19 .83 35	--	91 1.82	--	6.0 .17	--	.0 2AF	--		78 0	0.9 1.3		S
02/26/85 1315	5050 5050		12.7 106	45.0F 7.2C	7.9 160	--	--	--	--	--	--	--	--	--	3AF	--				
02/26/85 1710	5050 5050		12.6 106	45.0F 7.2C	7.8 160	--	--	--	--	--	--	--	--	--	3AF	--				
02/26/85 2120	5050 5050		12.5 103	44.1F 6.7C	8.0 164	--	--	--	--	--	--	--	--	--	1AF	--				
02/27/85 0640	5050 5050		12.0 92	39.0F 3.9C	8.1 157	--	--	--	--	--	--	--	--	--	4AF	--				
02/27/85 0930	5050 5050		12.6 103	43.0F 6.1C	7.7 156	--	--	--	--	--	--	--	--	--	4AF	--				
05/13/85 1400	5050 5050		10.5 104	58.0F 14.4C	7.8 147	--	--	--	--	--	--	--	--	--	2AF	--				

MINERAL ANALYSES OF SURFACE WATER

116

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM	
						CA	MG	NA	K	CACO3	SD4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCW			

F3		1302.00		KLAMATH R AB SALMON RIVER						F05A2 CONTINUED										
05/13/85 1600	5050 5050		10.7 107	59.0F 15.0C	8.1	146	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0430	5050 5050		10.6 101	55.0F 12.8C	7.8	148	--	--	--	--	--	--	--	--	--	1AF	--			
05/14/85 0850	5050 5050		10.9 105	56.0F 13.3C	7.9	149	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1210	5050 5050		10.6 105	58.0F 14.4C	8.1	148	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1605	5050 5050		10.5 107	60.8F 16.0C	8.1	142	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 2115	5050 5050		10.5 104	58.1F 14.5C	8.1	146	--	--	--	--	--	--	--	--	--	2AF	--			
05/15/85 0515	5050 5050		10.7 102	55.0F 12.8C	7.9 8.0	153 149	12 .60 39	8.0 .66 43	6.0 .26 17	--	67 1.34	--	2.0 .06	--	.0 1A	--		63 0	0.3 0.4	S
05/15/85 0800	5050 5050		10.5 102	56.0F 13.3C	7.6	143	--	--	--	--	--	--	--	--	--	2AF	--		S	
05/15/85 1340	5050 5050		10.6 111	62.6F 17.0C	8.0	145	--	--	--	--	--	--	--	--	--	2AF	--		S	
08/12/85 1300	5050 5050		9.2 108	73.4F 23.0C	8.1	206	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/12/85 1700	5050 5050		8.8 105	75.2F 24.0C	8.5	184	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/12/85 1930	5050 5050		8.5 99	73.0F 22.8C	8.3	190	--	--	--	--	--	--	--	--	--	3AF	--		S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPL LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	B SID2	F TDS SUM	TH NCH		
										CACD3	SO4	CL	NO3						

F3 1302.00						KLAMATH R AB SALMON RIVER				F05A2 CONTINUED									
08/13/85 0500	5050 5050		8.6 97	70.0F 21.1C	8.2 192	--	--	--	--	--	--	--	--	3AF	--				
08/13/85 0825	5050 5050		9.4 106	69.8F 21.0C	8.0 193	--	--	--	--	--	--	--	--	3AF	--		S		
08/13/85 1310	5050 5050			72.5F 22.5C	8.5 204	--	--	--	--	--	--	--	--	3AF	--		S		
08/13/85 1640	5050 5050		9.3 110	73.9F 23.3C	8.7 196	--	--	--	--	--	--	--	--	3AF	--		S		
08/13/85 2010	5050 5050		8.7 101	72.5F 22.5C	8.3 190	--	--	--	--	--	--	--	--	3AF	--		S		
08/14/85 0430	5050 5050		8.9 103	71.6F 22.0C	8.2 194	--	--	--	--	--	--	--	--	4AF	--		S		
08/14/85 0835	5050 5050		9.2 104	69.8F 21.0C	8.0 194	--	--	--	--	--	--	--	--	4AF	--		S		
08/14/85 1240	5050 5050		9.0 105	72.5F 22.5C	8.3 197	--	--	--	--	--	--	--	--	5AF	--		S		
08/20/85 1315	5050 5050		9.3 106	70.7F 21.5C	8.5 186	--	--	--	--	--	--	--	--	3AF	--		S		
01/22/86 1315	5050 5050		13.3 110	43.7F 6.5C	7.7 148	--	--	--	--	--	--	--	--	5AF	--		S		
01/22/86 1745	5050 5050		12.7 105	43.7F 6.5C	7.7 147	--	--	--	--	--	--	--	--	7AF	--		S		
01/22/86 2135	5050 5050		12.4 101	43.0F 6.1C	8.0 145	--	--	--	--	--	--	--	--	7AF	--		S		

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SID2	F	TDS SUM	TH NCH	SAR ASAR	
*****																				*****
F3 1302.00		KLAMATH R AB SALMON RIVER								F05A2 CONTINUED										
01/23/86 0540	5050 5050		13.0		7.6 138	--	--	--	--	--	--	--	--	--	--	--				
														6AF	--					S
01/23/86 0930	5050 5050		13.2		7.5 137	--	--	--	--	--	--	--	--	--	--	--				
														8AF	--					S
F3 1305.00																				
10/12/50 1150	5050 5000				9.7 261	18 .90 32	9.0 .74 27	24 1.04 37	4.0 .10 4	91 1.82 65	34 .71 25	10 .28 10	.3 .00 0	.2 23.0	--		177	82 0	1.2 1.6	
F3 1327.00		KLAMATH R AB TI CREEK								F05C1										
04/17/84 1350	5050 5050		12.0 114	53.6F 12.0C	7.9 145	--	--	--	--	--	--	--	--	--	--	--				
														8AF	--					
05/16/84 0355	5050 5050		10.6 97	50.9F 10.5C	7.5 130	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					
05/16/84 0730	5050 5050		11.3 104	51.1F 10.6C	7.1 135	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					
05/16/84 1200	5050 5050		11.8 113	54.5F 12.5C	7.9 138	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					S
05/16/84 1550	5050 5050		11.1 107	55.4F 13.0C	8.0 140	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					S
05/16/84 1950	5050 5050		10.4 101	55.4F 13.0C	8.1 138	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					S
05/17/84 0400	5050 5050		10.4 98	53.6F 12.0C	7.6 137	--	--	--	--	--	--	--	--	--	--	--				
														5AF	--					S
05/17/84 0715	5050 5050		11.3 107	54.0F 12.2C	7.6 139	--	--	--	--	--	--	--	--	--	--	--				
														4AF	--					S

118

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM				
					PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SiO2	TDS SUM	TH NCM						
F3 1327.00																			F05C1 CONTINUED					
KLAMATH R A8 T1 CREEK																								
05/17/84	5050			57.2F	7.9	140	--	--	--	--	--	--	--	--	--	--	--							
1030	5050			14.0C		134									4AF	--		S						
05/17/84	5050		11.3	58.1F	8.1	140	--	--	--	--	--	--	--	--	--	--								
1155	5050		113	14.5C		137									5AF	--		S						
05/17/84	5050		10.7	58.5F	8.1	135	--	--	--	--	--	--	--	--	--	--								
1600	5050		107	14.7C		134									6AF	--		S						
05/17/84	5050		10.1	57.2F	8.0	142	--	--	--	--	--	--	--	--	--	--								
2000	5050		100	14.0C		133									6AF	--		S						
05/18/84	5050		10.6	55.9F	7.7	137	10	6.0	8.0	--	59	--	2.0	--	.1	--	50	0.5						
0715	5050		103	13.3C	7.8	138	.50	.49	.35		1.18	--	.06		4A	--	0	0.5						
							37	37	26									S						
08/27/84	5050		10.1	72.5F	8.3	205	--	--	--	--	--	--	--	--	--	--								
1230	5050		118	22.5C											2AF	--								
08/27/84	5050		9.6		8.3	208	--	--	--	--	--	--	--	--	--	--								
1645	5050														2AF	--								
08/27/84	5050		8.3	69.8F	8.3	205	--	--	--	--	--	--	--	--	--	--								
1955	5050		95	21.0C											2AF	--								
08/28/84	5050		8.0	68.0F	7.8	209	--	--	--	--	--	--	--	--	--	--								
0530	5050		89	20.0C											2AF	--								
08/28/84	5050		8.7		8.1	203	--	--	--	--	--	--	--	--	--	--								
0815	5050														2AF	--								
08/28/84	5050		9.7	73.4F	8.2		--	--	--	--	--	--	--	--	--	--								
1210	5050		115	23.0C											2AF	--								
08/28/84	5050		9.2	73.9F	8.3	202	--	--	--	--	--	--	--	--	--	--								
1605	5050		109	23.3C											2AF	--								

119

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	CACD3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH MCH		

F3 1327.00		KLAMATH R AB TI CREEK										F05C1 CONTINUED							
08/28/84 2015	5050 5050		8.4 97	70.7F 21.5C	8.3 207	--	--	--	--	--	--	--	--	--	--				
														2AF	--				
08/29/84 0340	5050 5050		7.9 88	68.0F 20.0C	8.1 206	--	--	--	--	--	--	--	--	--	--				
														3AF	--				
08/29/84 0815	5050 5050		8.6 97	68.9F 20.5C	8.1 204	--	--	--	--	--	--	--	--	--	--				
														2AF	--				
10/02/84 1220	5050 5050		11.6 123	63.5F 17.5C	8.2 241	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
10/02/84 1625	5050 5050		11.4 119	61.7F 16.5C	8.1 240	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
10/02/84 2005	5050 5050		9.6 99	60.8F 16.0C	8.2 242	--	--	--	--	--	--	--	--	--	--				
														2AF	--				
10/03/84 0500	5050 5050		8.9 90	59.0F 15.0C	8.3 242	--	--	--	--	--	--	--	--	--	--				
														3AF	--				
10/03/84 0900	5050 5050		10.5 107	59.9F 15.5C	8.2 241 8.0 245	16 .80 32	10 .82 33	20 .87 35	--	92 1.84	--	6.0 .17	--	.1 2AF	--		81 0	1.0 1.4	
																		S	
02/26/85 1250	5050 5050		12.9 108	44.1F 6.7C	8.0 157	--	--	--	--	--	--	--	--	--	--				
														3AF	--				
02/26/85 1640	5050 5050		12.5 104	44.1F 6.7C	7.8 161	--	--	--	--	--	--	--	--	--	--				
														3AF	--				
02/26/85 2100	5050 5050		11.6 95	43.0F 6.1C	8.0 161	--	--	--	--	--	--	--	--	--	--				
														4AF	--				
02/27/85 0605	5050 5050		11.8 93	39.9F 4.4C	8.0 158	--	--	--	--	--	--	--	--	--	--				
														5AF	--				

120

[illegible]

KLAMATH R AB TI CREEK

F05C1 CONTINUED

Date	Time	Lat	Long	Alt	Temp	Humid	Wind	Dir	Speed	Pressure	Clouds	Visib	Remarks		
02/27/85	0900	5050	12.1 98	42.0F 5.6C	7.5 8.1	164 172	.75 .38	.10 .42	9.0 20	-- 1.46	-- 3.0 .08	-- 2A	-- --	78 6	0.4 0.6
03/05/85	1420	5050	13.0 107	42.8F 6.0C	6.8	174	--	--	--	--	--	2AF	--		
05/13/85	1330	5050	10.2 102	58.0F 14.4C	8.0	149	--	--	--	--	--	3AF	--		
05/13/85	1525	5050	10.8 108	58.0F 14.4C	8.2	148	--	--	--	--	--	2AF	--		
05/13/85	2000	5050	10.3 102	57.2F 14.0C	8.2	150	--	--	--	--	--	2AF	--		
05/14/85	0400	5050	9.8 93	54.0F 12.2C	7.6	151	--	--	--	--	--	2AF	--		
05/14/85	0720	5050	10.5 102	56.0F 13.3C	8.0	149	--	--	--	--	--	2AF	--		
05/14/85	1145	5050	10.5 104	57.0F 13.9C	8.1	147	--	--	--	--	--	2AF	--		
05/14/85	1530	5050	10.6 107	59.0F 15.0C	8.2	145	--	--	--	--	--	2AF	--		
05/14/85	2030	5050	9.8 96	56.3F 13.5C	8.2	148	--	--	--	--	--	2AF	--		
05/15/85	0445	5050	10.0 97	56.0F 13.3C	8.0 7.9	150 149	.13 .65 41	8.0 .66 42	6.0 .26 17	-- 1.34	-- 2.0 .06	-- 1A	-- --	66 0	0.3 0.4
05/15/85	0650	5050	9.9 95	55.0F 12.8C	7.6	145	--	--	--	--	--	2AF	--		

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SiO2	TDS SUM	TH NCH	SAR ASAR	

F3		1327.00	KLAMATH R AB TI CREEK										F05C1 CONTINUED							
05/15/85 1305	5050 5050		10.6 108	59.9F 15.5C	8.1 144	--	--	--	--	--	--	--	--	--	--	2AF	--		S	
08/12/85 1230	5050 5050		9.3 110	73.4F 23.0C	8.2 197	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/12/85 1615	5050 5050		9.6 114	73.4F 23.0C	8.6 195	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/12/85 1905	5050 5050		8.4 98	72.5F 22.5C	8.3 194	--	--	--	--	--	--	--	--	--	--	4AF	--		S	
08/13/85 0430	5050 5050		7.8 88	69.1F 20.6C	8.2 194	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/13/85 0800	5050 5050		8.5 96	68.9F 20.5C	8.1 194	--	--	--	--	--	--	--	--	--	--	5AF	--		S	
08/13/85 1220	5050 5050		9.1 108	73.4F 23.0C	8.7 195	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/13/85 1600	5050 5050			75.0F 23.9C	8.6 195	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/13/85 1930	5050 5050		8.5 100	72.5F 22.5C	8.1 194	--	--	--	--	--	--	--	--	--	--	3AF	--		S	
08/14/85 0400	5050 5050		8.2 93	69.8F 21.0C	8.2 199	--	--	--	--	--	--	--	--	--	--	7AF	--		S	
08/14/85 0805	5050 5050		8.5 97	69.8F 21.0C	8.2 199	14 .70 35	9.0 .74 37	13 .57 28	--	83 1.66	--	5.0 .14	--	.1 2A	--			72 0	0.7 0.9	S
08/14/85 1210	5050 5050		9.7 116	74.3F 23.5C	8.5 200	--	--	--	--	--	--	--	--	--	--	7AF	--			

123

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH		

F3		1330.00	KLAMATH R AB DILLON C						F05C1 CONTINUED										
05/16/84	5050		10.8	55.4F	7.7	141	--	--	--	--	--	--	--	--	--				
1530	5050		104	13.0C		137									4AF	--			S
05/16/84	5050		10.5	55.4F	7.9	139	--	--	--	--	--	--	--	--	--	--			
1935	5050		102	13.0C		138									4AF	--			S
05/17/84	5050		10.3	53.6F	7.4	137	--	--	--	--	--	--	--	--	--	--			
0345	5050		97	12.0C		141									5AF	--			S
05/17/84	5050		10.6	54.0F	7.5	130	--	--	--	--	--	--	--	--	--	--			
0645	5050		101	12.2C		137									5AF	--			
05/17/84	5050		10.7	57.2F	7.8	140	--	--	--	--	--	--	--	--	--	--			
1140	5050		106	14.0C		139									4AF	--			
05/17/84	5050		10.6	58.1F	7.9	139	--	--	--	--	--	--	--	--	--	--			X
1530	5050		106	14.5C		67									1AF	--			S
05/17/84	5050		10.2	58.1F	8.1	140	--	--	--	--	--	--	--	--	--	--			X
2140	5050		102	14.5C		72									0AF	--			S
05/17/84	5050		10.3	56.3F	8.0	142	--	--	--	--	--	--	--	--	--	--			X
2255	5050		101	13.5C		68									1AF	--			S
05/18/84	5050		10.4	56.3F	7.7	125	10	6.0	8.0	--	60	--	3.0	--	.1	--		50	0.5
0645	5050		102	13.5C	7.8	139	.50	.49	.35		1.20	--	.08		.5A	--		0	0.5
							37	37	26										S
08/27/84	5050		9.5	73.4F	8.3	213	--	--	--	--	--	--	--	--	--	--			
1200	5050		112	23.0C											2AF	--			
08/27/84	5050		8.9	69.8F	8.4	203	--	--	--	--	--	--	--	--	--	--			
1940	5050		101	21.0C											2AF	--			
08/28/84	5050		8.0		8.1	207	--	--	--	--	--	--	--	--	--	--			
0345	5050														2AF	--			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SI02	F	TDS SUM	TH NCH	SAR ASAR	

F3 1330.00						KLAMATH R AB DILLON C						F05C1 CONTINUED								
08/28/84	5050		8.2	67.1F	8.1	206	--	--	--	--	--	--	--	--	--					
0750	5050		91	19.5C											2AF	--				
08/28/84	5050		9.1	72.5F	8.3	212	--	--	--	--	--	--	--	--	--	--				
1135	5050		107	22.5C											2AF	--				
08/28/84	5050		9.4	73.4F	8.3	203	--	--	--	--	--	--	--	--	--	--				
1535	5050		111	23.0C											2AF	--				
08/28/84	5050		8.7	70.7F	8.1	209	--	--	--	--	--	--	--	--	--	--				
1950	5050		100	21.5C											2AF	--				
08/29/84	5050		8.0	68.0F	8.1	210	--	--	--	--	--	--	--	--	--	--				
0345	5050		89	20.0C											2AF	--				
08/29/84	5050		8.3	70.0F	8.3	204	15	9.0	14	--	82	--	5.0	--	.1	--		74	0.7	
0750	5050		95	21.1C	8.0	208	.75	.74	.61		1.64	--	.14	--	1A	--		0	0.9	S
							36	35	29											
10/02/84	5050		10.8	62.6F	8.1	247	--	--	--	--	--	--	--	--	--	--				
1150	5050		114	17.0C											1AF	--				
10/02/84	5050		10.4	62.6F	8.0	248	--	--	--	--	--	--	--	--	--	--				
1600	5050		110	17.0C											1AF	--				
10/02/84	5050		10.0	60.8F	8.0	245	--	--	--	--	--	--	--	--	--	--				
1940	5050		103	16.0C											2AF	--				
10/03/84	5050		9.5	59.9F	8.3	246	--	--	--	--	--	--	--	--	--	--				
0420	5050		97	15.5C											3AF	--				
10/03/84	5050		9.8	59.4F	8.0	246	--	--	--	--	--	--	--	--	--	--				
0835	5050		99	15.2C											2AF	--				
02/26/85	5050		12.8	44.1F	7.8	176	--	--	--	--	--	--	--	--	--	--				
1210	5050		107	6.7C											4AF	--				

125

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SID2	TDS SUM	TH NCH	SAR ASAR	

F3		1330.00	KLAMATH R AB DILLON C				F05C1 CONTINUED												
02/26/85 1610	5050 5050			44.1F 6.7C	7.7	173	--	--	--	--	--	--	--	--	4AF	--			
02/26/85 2040	5050 5050		11.8 97	43.0F 6.1C	8.0	173	--	--	--	--	--	--	--	--	4AF	--			
02/27/85 0515	5050 5050		12.2 96	39.9F 4.4C	8.1	167	--	--	--	--	--	--	--	--	4AF	--			
02/27/85 0845	5050 5050		12.1 99	43.0F 6.1C	7.6 8.1	181 181	14 .70 38	9.0 .74 40	9.0 .39 21	--	76 1.52	--	3.0 .08	--	.0 6A	--	72 0	0.5 0.6	S
05/13/85 1245	5050 5050		10.4 101	56.0F 13.3C	7.9	153	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 1510	5050 5050		10.3 103	58.0F 14.4C	8.2	152	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 1925	5050 5050		10.1 102	59.0F 15.0C	8.1	153	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0340	5050 5050		10.0 97	56.0F 13.3C	8.1	154	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0750	5050 5050		10.0 97	56.0F 13.3C	8.1	152	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1125	5050 5050		9.9 99	58.0F 14.4C	8.2	150	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1510	5050 5050		10.5 108	60.8F 16.0C	8.1	151	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1955	5050 5050		9.9 99	58.1F 14.5C	8.3	152	--	--	--	--	--	--	--	--	2AF	--			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM	
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SIO2	TDS SUM	TH NCH			

F3		1330.00	KLAMATH R AB DILLON C								F05C1 CONTINUED										
05/15/85	5050		10.7	55.0F	8.2	158	13	8.0	7.0	--	69	--	3.0	--	.0	--		66	0.4		
0400	5050		103	12.8C	8.0	152	.65	.66	.30		1.38		.08		1A	--		0	0.5	S	
							40	41	19												
05/15/85	5050		9.8	56.0F	7.8	149	--	--	--	--	--	--	--	--	--	--				S	
0630	5050		96	13.3C											2AF	--					
05/15/85	5050		10.3	60.8F	8.0	149	--	--	--	--	--	--	--	--	--	--				S	
1240	5050		106	16.0C											2AF	--					
08/12/85	5050		9.5	75.2F	8.3	192	--	--	--	--	--	--	--	--	--	--				S	
1210	5050		115	24.0C											3AF	--					
08/12/85	5050		8.7	72.5F	8.3	196	--	--	--	--	--	--	--	--	--	--				S	
1530	5050		102	22.5C											3AF	--					
08/13/85	5050		7.9	69.1F	8.2	196	--	--	--	--	--	--	--	--	--	--				S	
0410	5050		89	20.6C											3AF	--					
08/13/85	5050		8.4	70.7F	8.0	195	--	--	--	--	--	--	--	--	--	--				S	
0730	5050		97	21.5C											3AF	--					
08/13/85	5050		9.1	73.4F	8.6	197	--	--	--	--	--	--	--	--	--	--				S	
1150	5050		108	23.0C											3AF	--					
08/13/85	5050		9.5	74.3F	8.6	196	--	--	--	--	--	--	--	--	--	--				S	
1520	5050		113	23.5C											3AF	--					
08/13/85	5050		8.8	74.3F	8.1	199	--	--	--	--	--	--	--	--	--	--				S	
1920	5050		105	23.5C											5AF	--					
08/14/85	5050		8.1	69.8F	8.4	200	--	--	--	--	--	--	--	--	--	--				S	
0340	5050		92	21.0C											6AF	--					
08/14/85	5050		8.1	70.7F	8.2	198	--	--	--	--	--	--	--	--	--	--				S	
0735	5050		93	21.5C											6AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REH
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SI02	F	TDS SUM	

F3 1330.00		KLAMATH R AB DILLON C										F05C1 CONTINUED							
08/14/85	5050		9.5	76.1F	8.5	198	--	--	--	--	--	--	--	--	--	--	--	--	
1135	5050		116	24.5C											7AF	--			S
08/20/85	5050		9.0	67.1F	8.5	191	--	--	--	--	--	--	--	--	--	--	--	--	
1145	5050		100	19.5C											3AF	--			S
01/22/86	5050		13.2	42.8F	7.7	155	--	--	--	--	--	--	--	--	--	--	--	--	
1225	5050		108	6.0C											5AF	--			S
01/22/86	5050		12.2	43.7F	7.7	153	--	--	--	--	--	--	--	--	--	--	--	--	
1645	5050		101	6.5C											9AF	--			S
01/22/86	5050		12.5	42.1F	8.0	152	--	--	--	--	--	--	--	--	--	--	--	--	
2030	5050		101	5.6C											7AF	--			S
01/23/86	5050		11.7		7.7	146	--	--	--	--	--	--	--	--	--	--	--	--	
0450	5050														5AF	--			S
01/23/86	5050		12.9	42.1F	7.5	145	--	--	--	--	--	--	--	--	--	--	--	--	
0840	5050		105	5.6C											6AF	--			S
F3 1333.00		KLAMATH R AB INDEPENDENCE CREEK										F05C1							
05/16/84	5050		11.1	51.1F	7.5	140	--	--	--	--	--	--	--	--	--	--	--	--	
0545	5050		102	10.6C		138									5AF	--			S
05/16/84	5050		11.2	51.8F	7.5	135	--	--	--	--	--	--	--	--	--	--	--	--	
0925	5050		104	11.0C		142									5AF	--			S
05/16/84	5050		11.0	55.0F	7.7	143	--	--	--	--	--	--	--	--	--	--	--	--	
1345	5050		106	12.8C		142									5AF	--			
05/16/84	5050		10.4	55.9F	7.9	138	--	--	--	--	--	--	--	--	--	--	--	--	
1750	5050		102	13.3C		144									4AF	--			S

[illegible]

Klamath R ab Independence Creek

F05C1 CONTINUED

[illegible]

S
X
S
S
S
S
S
S
S

130

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM	
						CA	MG	NA	K	PERCENT CAC03	REACTANCE SO4	VALUE CL	NO3	TURB	B SI02	F TDS SI02	TH NCH	SAR ASAR	
* * * * *																			
F3 1333.00		KLAMATH R AB INDEPENDENCE CREEK								F05C1 CONTINUED									
08/28/84 1350	5050 5050		9.7 114	72.5F 22.5C	8.0 219	--	--	--	--	--	--	--	--	--	--	2AF	--		S
08/28/84 1745	5050 5050		9.5 111	71.6F 22.0C	8.2 210	--	--	--	--	--	--	--	--	--	--	2AF	--		S
08/28/84 2215	5050 5050		8.6 100	71.6F 22.0C	8.2	--	--	--	--	--	--	--	--	--	--	2AF	--		S
08/29/84 0545	5050 5050		7.8 89	69.8F 21.0C	8.1 210	--	--	--	--	--	--	--	--	--	--	3AF	--		S
08/29/84 0930	5050 5050		9.2 105	69.8F 21.0C	8.0 211	--	--	--	--	--	--	--	--	--	--	2AF	--		S
08/30/84 0830	5050 5050		8.9 101	68.9F 20.5C	7.9 212	--	--	--	--	--	--	--	--	--	--	2AF	--		S
10/01/84 1315	5050 5050		10.6 109	59.9F 15.5C	8.1 248	--	--	--	--	--	--	--	--	--	--	2AF	--		S
10/01/84 1715	5050 5050		10.1 104	59.9F 15.5C	8.1 247	--	--	--	--	--	--	--	--	--	--	2AF	--		S
10/01/84 2155	5050 5050		9.7 101	61.3F 16.3C	8.3 248	--	--	--	--	--	--	--	--	--	--	2AF	--		S
10/02/84 0540	5050 5050		9.5 96	59.0F 15.0C	8.2 249	--	--	--	--	--	--	--	--	--	--	3AF	--		S
10/02/84 0935	5050 5050		9.7 99	59.0F 15.0C	7.9 248	--	--	--	--	--	--	--	--	--	--	2AF	--		S
10/02/84 1355	5050 5050		10.5 110	61.5F 16.4C	8.1 245	--	--	--	--	--	--	--	--	--	--	2AF	--		S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM

F3 1333.00				KLAMATH R AB INDEPENDENCE CREEK								F05C1 CONTINUED							
02/25/85 1420	5050 5050		12.3 107	46.4F 8.0C	8.0 169	--	--	--	--	--	--	--	--	--	4AF	--			S
02/25/85 2210	5050 5050		12.3 103	44.1F 6.7C	8.0 167	--	--	--	--	--	--	--	--	--	4AF	--			S
02/26/85 0645	5050 5050		11.8 95	41.0F 5.0C	8.0 168	--	--	--	--	--	--	--	--	--	4AF	--			S
02/26/85 1030	5050 5050		12.4 101	42.1F 5.6C	7.9 168	--	--	--	--	--	--	--	--	--	4AF	--			S
02/26/85 1445	5050 5050		12.1 99	42.0F 5.6C	8.0 171 8.1 178	15 .75 38	10 .82 42	9.0 .39 20	--	75 1.50	--	3.0 .08	--	.0 2A	--		78 4	0.4 0.6	S
03/05/85 1500	5050 5050		12.7 105	42.8F 6.0C	6.8 181	--	--	--	--	--	--	--	--	--	3AF	--			
05/13/85 1325	5050 5050		10.8 107	57.0F 13.9C	8.2 154	--	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 1720	5050 5050		10.3 105	59.0F 15.0C	8.4 155	--	--	--	--	--	--	--	--	--	2AF	--			
05/13/85 2020	5050 5050		10.0 99	57.0F 13.9C	8.2 154	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0530	5050 5050		9.2 89	55.0F 12.8C	8.0 151	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 0940	5050 5050		10.3 100	55.0F 12.8C	8.0 151	--	--	--	--	--	--	--	--	--	2AF	--			
05/14/85 1330	5050 5050		10.5 106	58.1F 14.5C	8.2 154	--	--	--	--	--	--	--	--	--	2AF	--			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
					PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB		F		TDS SUM	TH NCH	
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	
F3		1333.00			KLAMATH R AB INDEPENDENCE CREEK										F05C1 CONTINUED						
05/14/85	5050		10.4	59.0F	8.1	159	--	--	--	--	--	--	--	--	--	--					
1805	5050		106	15.0C											2AF	--					
05/14/85	5050		9.9	58.0F	8.4	156	12	8.0	7.0	--	70	--	3.0	--	.0	--		63	0.4		
2050	5050		99	14.4C	7.9	154	.50	.66	.30		1.40	--	.08	--	1A	--		0	0.5	S	
							38	42	19												
05/15/85	5050		9.0	55.0F	7.7	151	--	--	--	--	--	--	--	--	--	--					
0600	5050		87	12.8C											2AF	--				S	
05/15/85	5050		10.4	57.2F	8.0	148	--	--	--	--	--	--	--	--	--	--					
1155	5050		103	14.0C											2AF	--				S	
08/12/85	5050		9.5	72.5F	8.5	196	--	--	--	--	--	--	--	--	--	--					
1740	5050		112	22.5C											3AF	--				S	
08/12/85	5050		8.1	73.0F	8.4	196	--	--	--	--	--	--	--	--	--	--					
2055	5050		96	22.8C											3AF	--				S	
08/13/85	5050		8.0	69.8F	8.2	198	--	--	--	--	--	--	--	--	--	--					
0540	5050		92	21.0C											4AF	--				S	
08/13/85	5050		8.9	71.6F	8.1	198	--	--	--	--	--	--	--	--	--	--					
0940	5050		104	22.0C											5AF	--				S	
08/13/85	5050		10.0	73.9F	8.6	198	--	--	--	--	--	--	--	--	--	--					
1355	5050		120	23.3C											7AF	--				S	
08/13/85	5050		9.4	32 F	8.7	198	--	--	--	--	--	--	--	--	--	--					
1735	5050		66	0 C											8AF	--				S	
08/13/85	5050		8.0	73.9F	8.8	197	--	--	--	--	--	--	--	--	--	--					
2135	5050		96	23.3C											7AF	--				S	
08/14/85	5050			71.1F	8.1	197	--	--	--	--	--	--	--	--	--	--					
0540	5050			21.7C											7AF	--				S	

DATE TIME	SAMPLER LAB	G.M. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	PERCENT REACTANCE VALUE			B	F	TDS	TH	SAR			
										CACO3	SO4	CL						TURB	SI02	
F3 1333.00		KLAMATH R AB INDEPENDENCE CREEK										F05C1 CONTINUED								
08/14/85 1135	5050 5050		9.4 112	73.4F 23.0C	8.3 200	--	--	--	--	--	--	--	--	7AF	--				S	
08/14/85 1400	5050 5050		9.7 117	75.0F 23.9C	8.7 202	--	--	--	--	--	--	--	--	7AF	--				S	
08/15/85 1855	5050 5050		8.8 106	74.3F 23.5C	8.5 199	--	--	--	--	--	--	--	--	6AF	--				S	
08/20/85 1050	5050 5050		9.2 105	69.8F 21.0C	8.4 193	--	--	--	--	--	--	--	--	3AF	--				S	
01/21/86 1525	5050 5050		12.5 102	42.1F 5.6C	7.7 155	--	--	--	--	--	--	--	--	5AF	--				S	
01/21/86 1750	5050 5050			42.1F 5.6C	7.8 157	--	--	--	--	--	--	--	--	5AF	--				S	
01/21/86 2200	5050 5050		12.7 102	41.0F 5.0C	8.0 157	--	--	--	--	--	--	--	--	5AF	--				S	
01/22/86 0645	5050 5050		11.9 97	42.1F 5.6C	7.9 157	--	--	--	--	--	--	--	--	5AF	--				S	
01/22/86 1115	5050 5050		12.2 101	42.8F 6.0C	7.5 157	--	--	--	--	--	--	--	--	6AF	--				S	
F3 1336.00		KLAMATH R AB OAK FLAT CREEK										F05C1								
04/17/84 1655	5050 5050		11.1 105	52.7F 11.5C	7.7 157	12 .60 38	7.0 .58 37	9.0 .39 25	--	64 1.28	--	3.0 .08	--	.0 8A	--		59 0	0.5 0.6	S	
05/16/84 0510	5050 5050		10.8 101	52.0F 11.1C	7.4 140	--	--	--	--	--	--	--	--	4AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.L. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SIO2	F	TDS SUM	TH NCH	SAR ASAR		

F3 1336.00		KLAMATH R AB OAK FLAT CREEK										F05C1 CONTINUED									
05/16/84 0855	5050 5050		11.1 105	52.7F 11.5C	7.6 138	--	--	--	--	--	--	--	--	--	--	4AF	--				S
05/16/84 1310	5050 5050		11.0 107	55.0F 12.8C	7.8 150	--	--	--	--	--	--	--	--	--	--	4AF	--				S
05/16/84 1715	5050 5050		10.7 106	56.5F 13.6C	8.0 148	--	--	--	--	--	--	--	--	--	--	4AF	--				
05/17/84 0005	5050 5050		10.3 101	55.4F 13.0C	8.0 142	--	--	--	--	--	--	--	--	--	--	4AF	--				
05/17/84 0545	5050 5050		10.4 100	54.5F 12.5C	7.7 142	--	--	--	--	--	--	--	--	--	--	5AF	--				
05/17/84 0900	5050 5050		10.5 102	55.4F 13.0C	7.6 143	--	--	--	--	--	--	--	--	--	--	4AF	--				
05/17/84 1305	5050 5050		10.5 106	58.5F 14.7C	8.0 143	--	--	--	--	--	--	--	--	--	--	5AF	--				S
05/17/84 1710	5050 5050		10.5 107	59.0F 15.0C	8.0 97	--	--	--	--	--	--	--	--	--	--	1AF	--				X
05/17/84 2110	5050 5050		10.1 102	58.1F 14.5C	8.0 96	--	--	--	--	--	--	--	--	--	--	1AF	--				X S
05/18/84 0820	5050 5050		10.1 100	56.3F 13.5C	7.7 144	11 .55 40	6.0 .49 35	8.0 .35 25	--	62 1.24	--	3.0 .08	--	.0 5A	--			52 0	0.5 0.5		S
08/27/84 1245	5050 5050		9.2 106	69.8F 21.0C	8.2 213	--	--	--	--	--	--	--	--	--	--	2AF	--				
08/27/84 1800	5050 5050		9.0 107	73.4F 23.0C	8.2 212	--	--	--	--	--	--	--	--	--	--	1AF	--				

134

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM			

F3 1336.00			KLAMATH R AB OAK FLAT CREEK								F05C1 CONTINUED											
08/27/84 2140	5050 5050		8.7 102	72.1F 22.3C	8.3 212	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
08/28/84 0915	5050 5050		8.9 102	69.8F 21.0C	8.1 211	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			1AF	--		
08/28/84 1320	5050 5050		9.2 109	72.5F 22.5C	8.1 216	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
08/28/84 1715	5050 5050		9.7 118	75.2F 24.0C	8.3 212	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
08/28/84 2145	5050 5050		8.5 101	73.4F 23.0C	8.4 212	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
08/29/84 0905	5050 5050		8.8 101	69.8F 21.0C	7.8 212	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
08/30/84 0745	5050 5050		8.7 99	68.9F 20.5C	7.9 210 7.9 215	15 .75 35	9.0 .74 35	15 .65 30	--	83 1.66	--	5.0 .14	--	.1 2A	--	--	74 0	0.8 1.0	--			
																						S
10/01/84 1250	5050 5050		10.7 112	61.5F 16.4C	8.1 248	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
10/01/84 1655	5050 5050		10.7 113	62.1F 16.7C	8.3 246	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			2AF	--		
10/01/84 2120	5050 5050		9.9 103	60.8F 16.0C	8.2 246	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			1AF	--		
10/02/84 0515	5050 5050		9.2 94	59.0F 15.0C	8.2 245	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			5AF	--		
10/02/84 0905	5050 5050		8.8 90	59.0F 15.0C	7.9 245	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
																			6AF	--		

135

S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					
						CA	MG	NA	K	PERCENT CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM

F3 1336.00					KLAMATH R AB DAK FLAT CREEK					F05C1 CONTINUED									
05/14/85 0910	5053 5050		10.1 99	56.0F 13.3C	8.0 158	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
05/14/85 1255	5050 5050		10.5 105	57.2F 14.0C	8.1 157	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
05/14/85 1725	5050 5050		10.7 110	59.9F 15.5C	8.3 158	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
05/14/85 2015	5050 5050		10.0 101	58.0F 14.4C	8.3 154 8.1 162	13 .65 39	8.0 .66 40	8.0 .35 21	--	72 1.44	--	3.0 .08	--	.2 1A	--		66 0	0.4 0.5	
05/15/85 0520	5050 5050		9.8 95	55.0F 12.8C	7.8 155	--	--	--	--	--	--	--	--	--	--	--	--	--	S
														2AF	--				
05/15/85 1125	5050 5050		10.4 104	57.2F 14.0C	8.2 153	--	--	--	--	--	--	--	--	--	--	--	--	--	
														2AF	--				
08/12/85 1710	5050 5050		9.3 113	75.2F 24.0C	8.7 195	--	--	--	--	--	--	--	--	--	--	--	--	--	
														4AF	--				
08/12/85 2140	5050 5050		8.2 98	73.9F 23.3C	8.4 201	--	--	--	--	--	--	--	--	--	--	--	--	--	
														4AF	--				
08/13/85 0515	5050 5050		8.3 95	69.8F 21.0C	8.2 200	--	--	--	--	--	--	--	--	--	--	--	--	--	
														6AF	--				
08/13/85 0905	5050 5050		9.1 64	32 F 0 C	8.3 207	--	--	--	--	--	--	--	--	--	--	--	--	--	
														6AF	--				
08/13/85 1325	5050 5050		9.2 109	73.0F 22.8C	8.6 202	--	--	--	--	--	--	--	--	--	--	--	--	--	
														8AF	--				
08/13/85 1705	5050 5050		9.0 110	76.1F 24.5C	8.9 199	--	--	--	--	--	--	--	--	--	--	--	--	--	
														8AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM	
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	F SI02	TDS SUM	TH NCH		SAR ASAR

F3		1336.00	KLAMATH R AB OAK FLAT CREEK								F09C1 CONTINUED								
08/13/85	5050		8.1	75.0F	9.0	197	--	--	--	--	--	--	--	--	--				
2110	5050		98	23.9C											8AF	--			
08/14/85	5050		8.1	70.0F	7.8	202	--	--	--	--	--	--	--	--	--				
0530	5050		93	21.1C											8AF	--			
08/14/85	5050		8.7	71.6F	8.3	202	14	9.0	15	--	85	--	5.0	--	.1	--		72	0.8
1040	5050		102	22.0C	8.3	206	.70	.74	.65		1.70		.14		3A	--		0	1.0
							33	35	31										S
08/14/85	5050		9.2	73.9F	8.6	203	--	--	--	--	--	--	--	--	--	--			
1325	5050		110	23.3C											8AF	--			
08/14/85	5050		8.6	77.0F	8.6	199	--	--	--	--	--	--	--	--	--	--			
1815	5050		106	25.0C											7AF	--			
08/20/85	5050		8.8	69.8F	8.6	193	--	--	--	--	--	--	--	--	--	--			
1025	5050		101	21.0C											4AF	--			
01/21/86	5050		12.4	42.1F	7.7	167	--	--	--	--	--	--	--	--	--	--			
1505	5050		101	5.6C											6AF	--			
01/21/86	5050		12.3		7.8	168	--	--	--	--	--	--	--	--	--	--			
1715	5050														6AF	--			
01/21/86	5050		12.4	41.0F	8.0	165	--	--	--	--	--	--	--	--	--	--			
2135	5050		100	5.0C											6AF	--			
01/22/86	5050		12.2	42.1F	7.8	166	--	--	--	--	--	--	--	--	--	--			
0615	5050		100	5.6C											7AF	--			
01/22/86	5050		12.2	42.8F	7.5	168	--	--	--	--	--	--	--	--	--	--			
1025	5050		101	6.0C											7AF	--			

MINERAL ANALYSES OF SURFACE WATER

135

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	PERCENT REACTANCE VALUE	TURB	B SiO2	F	TDS SUM	TH NCH	SAR ASAR	

F3 1395.00		KLAMATH R AB HAPPY CAMP										F05C2 CONTINUED									
05/18/84	5050		10.3	58.1F	7.7	153	11	7.0	9.0	--	65	--	3.0	--	.0	--		56	0.5		
1015	5050		105	14.5C	7.8	154	.55	.58	.39		1.30		.08		6A	--		0	0.6		
							36	38	26											S	
08/27/84	5050		10.0	70.9F	8.3	216	--	--	--	--	--	--	--	--	--	--					
1135	5050		117	21.6C											1AF	--					
08/27/84	5050		11.5	72.0F	8.4	217	--	--	--	--	--	--	--	--	--	--					
1205	5050		136	22.2C											2AF	--					
08/27/84	5050		10.0	72.5F	8.3	228	--	--	--	--	--	--	--	--	--	--					
1710	5050		119	22.5C											1AF	--					
08/27/84	5050		10.9	73.4F	8.4	220	--	--	--	--	--	--	--	--	--	--					
1730	5050		131	23.0C											2AF	--					
08/27/84	5050		8.3	71.6F	8.3	216	--	--	--	--	--	--	--	--	--	--					
2015	5050		98	22.0C											1AF	--					
08/27/84	5050		8.5	71.6F	8.4	218	--	--	--	--	--	--	--	--	--	--					
2055	5050		100	22.0C											2AF	--					
08/28/84	5050		7.3	64.0F	8.4	214	--	--	--	--	--	--	--	--	--	--					
0450	5050		79	17.8C											2AF	--					
08/28/84	5050		7.0	67.1F	7.9	214	--	--	--	--	--	--	--	--	--	--					
0500	5050		79	19.5C											3AF	--					
08/28/84	5050		8.4	68.0F	7.6	217	--	--	--	--	--	--	--	--	--	--					
0800	5050		95	20.0C											2AF	--					
08/28/84	5050		9.3	69.8F	8.1	215	--	--	--	--	--	--	--	--	--	--					
0835	5050		108	21.0C											2AF	--					
08/28/84	5050		10.1	71.6F	8.1	215	--	--	--	--	--	--	--	--	--	--					
1205	5050		119	22.0C											1AF	--					

140

MINERAL ANALYSES OF SURFACE WATER

	DATE	SAMPLER	G.H.	DO	TEMP	FIELD	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM
	TIME	LAB	Q	SAT		LABORATORY	CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	SI02	F	TDS	TH	SAR			
			DEPTH			PH					EC	CACO3	SO4	CL							NO3		
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
	F3 1395.00			KLANATH R AB HAPPY CAMP										F05C2 CONTINUED									
141	08/28/84	5050		11.4	73.4F	8.3	214	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1235	5050		137	23.0C												2AF	--					
	08/28/84	5050		10.3	73.4F	8.3	214	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1605	5050		124	23.0C												1AF	--					
	08/28/84	5050		11.4	75.2F	8.4	212	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1635	5050		140	24.0C												2AF	--					
	08/28/84	5050		9.4	71.6F	8.4	214	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2020	5050		111	22.0C												2AF	--					
	08/28/84	5050		8.4	71.6F	8.4	213	--	--	--	--	--	--	--	--	--	--	--	--	--			
	2105	5050		99	22.0C												2AF	--					
08/29/84	5050		7.7	68.9F	8.0	217	--	--	--	--	--	--	--	--	--	--	--	--	--				
	0430	5050		88	20.5C												2AF	--					
08/29/84	5050		7.2	69.1F	8.3			--	--	--	--	--	--	--	--	--	--	--	--	--			
	0500	5050		83	20.6C												2AF	--					
08/29/84	5050		8.2	68.9F	7.5	214	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	0805	5050		94	20.5C												2AF	--					
08/29/84	5050		8.8	68.9F	8.1	215	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	0835	5050		101	20.5C												2AF	--					
08/30/84	5050		9.0	68.9F	8.0	215	14	9.0	16	--	84	--	6.0	--	.1	--		72	0.8				
	0900	5050		103	20.5C	7.9	218	.70	.74	.70	1.68	--	.17	--	2A	--		0	1.1		S		
								33	35	33													
10/01/84	5050		11.3	62.1F	8.3	257	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1205	5050		120	16.7C												2AF	--					
10/01/84	5050		11.0	62.1F	8.3	253	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
	1625	5050		117	16.7C												2AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM
					PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	SI02	TDS SUM	TH NCH		

F3		1395.00			KLANATH R AB HAPPY CAMP				F05C2 CONTINUED											
10/01/84 2050	5050 5050		9.4 98	60.8F 16.0C	8.4	254	--	--	--	--	--	--	--	--	--	2AF	--			
10/02/84 0450	5050 5050		8.8 91	60.1F 15.6C	8.1	252	--	--	--	--	--	--	--	--	--	3AF	--			
10/02/84 0820	5050 5050		9.4 96	59.0F 15.0C	8.0	252	--	--	--	--	--	--	--	--	--	3AF	--			
10/02/84 1310	5050 5050		11.8 123	60.1F 15.6C	8.3 8.0	252 254	16 .80 31	10 .82 32	22 .96 37	--	93 1.86	--	6.0 .17	--	.0 6AF	--		81 0	1.1 1.5	
142	02/25/85 1300	5050 5050	13.8 121	46.4F 8.0C	8.3	194	--	--	--	--	--	--	--	--	4AF	--			S	
	02/25/85 1725	5050 5050	11.9 102	45.0F 7.2C	8.0	197	--	--	--	--	--	--	--	--	4AF	--				
	02/25/85 2115	5050 5050	11.5 99	45.0F 7.2C	7.9	201	--	--	--	--	--	--	--	--	4AF	--				
	02/26/85 0545	5050 5050	11.2 90	40.5F 4.7C	8.0	194	--	--	--	--	--	--	--	--	5AF	--				
	02/26/85 0920	5050 5050	12.7 105	42.1F 5.6C	8.1	193	--	--	--	--	--	--	--	--	6AF	--				
	02/26/85 1320	5050 5050	13.1 107	41.5F 5.3C	8.2	196	--	--	--	--	--	--	--	--	6AF	--				
	03/06/85 0855	5050 5050	13.1 108	41.9F 5.5C	8.6	204	--	--	--	--	--	--	--	--	4AF	--				
	05/13/85 1150	5050 5050	11.0 117	62.0F 16.7C	8.4	170	--	--	--	--	--	--	--	--	3AF	--				

142

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURR	B SIO2	F	TDS SUM	TH NCH	SAR ASAR	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH MCH	SAR ASAR			

F3		1395.00	KLAMATH R AB HAPPY CAMP						F05C2 CONTINUED												
01/22/86	5050		11.8	42.1F	7.9	176	--	--	--	--	--	--	--	--	--						
0550	5050		97	5.6C										7AF	--				S		
01/22/86	5050		11.7	42.8F	7.7	177	--	--	--	--	--	--	--	--	--						
0955	5050		97	6.0C										9AF	--				S		
F3		1417.00	THOMPSON C NR HAPPY CAMP						F05C2												
04/18/84	5050		12.0	45.5F	7.4	84	--	--	--	--	--	--	--	--	--						
1045	5050	160E	104	7.5C										1AF	--				S		
08/30/84	5050			59.0F		131	10	9.0	2.0	--	59	--	1.0	--	.0	--		62	0.1		
1015	5050	24E		15.0C	7.9	130	.50	.74	.09		1.18	--	.03	--	1A	--		3	0.1		
							38	56	7										S		
10/02/84	5050		10.1	56.0F	7.8	133	--	--	--	--	--	--	--	--	--						
1250	5050	10E	100	13.3C										2AF	--				S		
02/26/85	5050		10.3	42.0F	7.4	87	--	--	--	--	--	--	--	--	--						
1045	5050	35E	85	5.6C										1AF	--				S		
05/16/85	5050		11.5	49.1F	7.5	87	7.0	6.0	2.0	.5	43	1.0	1.0	.0	.0	--	60	42	0.1		
0900	5050	100E	105	9.5C	7.8	89	.35	.49	.09	.01	.86	.02	.03	.00		--	43	0	0.1		
							37	52	10	1	95	2	3	0					T		
08/15/85	5050		9.1	68.0F	8.0	124	--	--	--	--	--	--	--	--	--						
1410	5050	15E	104	20.0C										0AF	--						
01/23/86	5050		11.8	42.0F	7.3	83	--	--	--	--	--	--	--	--	--						
1435	5050	80E	97	5.6C										2AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						
						CA	MG	NA	K	CAC03	SO4	CL	NO3	TURB	F SIG2	TDS SUM	TH NCH	SAR ASAR	REM	

F3		1425.00	FT GOFF C NR SEIAD VALLEY						F05C2											
04/18/84	5050		12.0	44.6F	7.3	72	--	--	--	--	--	--	--	--	--					
1030	5050	25E	103	7.0C											1AF	--				
08/30/84	5050			59.9F		122	--	--	--	--	--	--	--	--	--					
1025	5050	5E		15.5C											0AF	--				
10/02/84	5050		10.1	54.0F	7.5	125	9.0	9.0	2.0	--	58	--	1.0	--	.0	--	60	0.1		
1245	5050	10E	98	12.2C	8.0	122	.45	.74	.09		1.16	--	.03	--	1A	--	2	0.1		
							35	58	7										S	
02/26/85	5050		11.2	42.0F	7.3	75	--	--	--	--	--	--	--	--	--	--				
1030	5050	15E	93	5.6C											5AF	--			S	
05/16/85	5050		11.1	48.2F	7.5	78	--	--	--	--	--	--	--	--	--	--				
0920	5050		100	9.0C											0AF	--			S	
08/15/85	5050		9.2	65.3F	7.8	112	--	--	--	--	--	--	--	--	--	--				
1420	5050	3E	102	18.5C											0AF	--			S	
F3		1430.00	KLAMATH R NR SEIAD VLY						F05C2											
06/10/58	5050	7.75		61.0F			15	4.2	8.2	1.5	64	7.4	1.6	--	.05	.1				
1055	5050			16.1C	7.6	145	.75	.35	.36	.04	1.28	.15	.05	--	1E	12.0	89	0	0.5	
							50	23	24	3									S	
09/10/58	5050	4.85	8.5	69.1F			15	6.9	14	2.5	78	12	3.9	2.4	.02	.2				
1210	5050		98	20.6C	7.6	204	.75	.57	.61	.06	1.56	.25	.11	.04		27.0	130	0	0.9	
							38	29	31	3	80	13	6	2						
12/02/58	5050	5.33	12.3	45.0F	7.3		14	10	20	2.7	84	25	7.5	2.2	.1	.2		76	1.0	
1325	5000	4020	106	7.2C		239	.70	.82	.87	.07	1.68	.52	.21	.04		33.0	165	0	1.3	
							28	33	35	3	69	21	9	2						
02/04/59	5050	5.78	12.1	44.1F	7.3		16	8.9	10	1.6	82	11	5.3	2.3	.1	.2		77	0.5	
1300	5000	4790	103	6.7C	7.7	200	.80	.73	.44	.04	1.64	.23	.15	.04		30.0	134	0	0.7	
							40	36	22	2	80	11	7	2						
03/03/59	5050	5.98	12.0	46.0F	7.9		17	12	14	1.6	82	29	4.5	1.0	.1	.2		90	0.6	
1150	5000	5150	105	7.8C	7.7	213	.85	.99	.61	.04	1.64	.60	.13	.02		27.0	155	10	0.9	
							34	40	24	2	69	25	5	1						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM	
						CA	MG	NA	K	CACO3	SD4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR			

F3		1430.00	KLAMATH R NR SEIAD VLY					F05C2 CONTINUED													
04/07/59 1420	5050 5000	5.63 4530	10.7 101	52.0F 11.1C	7.7 8.0	159	14 .70 47	6.1 .50 34	6.0 .26 17	1.2 .03 2	69 1.38 82	9.6 .20 12	4.0 .11 7	.3 .00 0	.1 17.0	.0	100	69 0	0.3 0.4	S	
05/13/59 0900	5050 5000	4.68 3010	9.2 97	61.0F 16.1C	7.6 7.6	205	16 .80 37	9.0 .74 34	13 .57 26	2.5 .06 3	81 1.62 76	18 .37 17	4.8 .14 7	.4 .01 0	.1 1E 17.0	.2	129	77 0	0.6 0.9		
06/04/59 1030	5050 5000	4.33 2240	9.0 98	64.0F 17.8C	7.7 7.9	211	14 .70 30	9.5 .78 34	17 .74 32	3.5 .09 4	80 1.60 69	27 .56 24	4.5 .13 6	1.1 .02 1	.1 20.0	.0	145	74 0	0.9 1.1		
07/14/59 1430	5050 5000	3.73 1830	9.5 118	75.9F 24.4C	8.1 8.6	171	14 .70 37	7.1 .58 31	12 .32 28	2.6 .07 4	75 1.50 82	7.0 .15 8	6.2 .17 9	.0 .00 0	.1 25.0	.1	119	64 0	0.7 0.8		
08/11/59 0930	5050 5000	3.05 1220	8.3 99	72.0F 22.2C	8.1 7.4	187	15 .75 37	7.2 .59 29	14 .61 30	3.1 .08 4	81 1.62 81	6.0 .12 6	9.5 .27 13	.3 .00 0	.1 23.0	.1	127	67 0	0.7 1.0		
09/08/59 1110	5050 5000	3.34 1460	8.9 102	68.0F 20.0C	8.0 7.8	224	16 .80 32	11 .90 36	17 .74 29	3.6 .09 4	97 1.94 79	20 .42 17	2.0 .06 2	2.0 .03 1	.1 36.0	.1	166	84 0	0.8 1.2		
10/13/59 1010	5050 5000	3.39 1500	11.3 112	55.9F 13.3C	8.0 7.4	189	14 .70 35	6.1 .50 25	17 .74 37	3.0 .08 4	72 1.44 71	13 .27 13	10 .28 14	1.7 .03 1	.2 38.0	.1	146	60 0	1.0 1.1		
11/10/59 1100	5050 5000	4.25 2420	11.0 97	46.9F 8.3C	7.5 7.6	181	13 .65 33	6.7 .55 28	16 .70 36	2.2 .06 3	76 1.52 80	7.0 .15 8	6.3 .18 10	2.6 .04 2	.0 40.0	.2	140	60 0	0.9 1.1		
12/08/59 1040	5050 5000	4.43 2660	12.2 96	38.5F 3.6C	7.3 7.3	172	12 .60 31	6.8 .56 29	15 .65 34	3.8 .10 5	71 1.42 78	6.0 .12 7	9.0 .25 14	1.6 .03 2	.1 34.0	.1	131	58 0	0.9 1.0		
01/05/60 1045	5050 5000	4.48 1470	13.7 102	35.1F 1.7C	7.3 7.6	168	-- --	-- --	14 .61 33	-- --	71 1.42	-- --	6.8 .19	-- --	.1 4E	-- --		62		S	
02/09/60 1125	5050 5000	10.64 19700	11.4 91	39.9F 4.4C	7.3 7.3	150	-- --	-- --	7.5 .33 20	-- --	61 1.22	-- --	5.2 .15	-- --	.1 150E	-- --		68		S	
03/08/60 1130	5050 5000	7.58 7380	11.5 98	44.1F 6.7C	7.6 7.7	147	-- --	-- --	8.2 .36 20	-- --	71 1.42	-- --	4.5 .13	-- --	.0 155E	-- --		70		S	

147

148

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
					LABORATORY PH	EC	CA	MG	NA	K	MILLIEQUIVALENTS PER LITER				TURB	F SiO2						
											PERCENT REACTANCE PER LITER	NO3	CL	VALU								

F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED															
04/12/60 0935	5050 5000	5.94 5000E	10.5 101	53.1F 11.7C	7.7 7.6	232	--	--	13 .97 24	--	80 1.60	--	4.8 .14	--	.2 10E	--		90			S	
05/04/60 1000	5050 5000	4.95 3420	10.5 101	53.1F 11.7C	7.7 7.6	249	.19 .95 39	8.0 .66 27	17 .74 30	4.1 .10 4	79 1.58 64	36 .75 30	4.8 .14 6	.3 .00 0	.1 2E	.1 22.0	159	79 2	0.8 1.1			
06/07/60 0855	5050 5000	5.34 6020	9.0 96	62.1F 16.7C	7.7 7.6	147	--	--	6.6 .29 19	--	68 1.36	--	3.5 .10	--	.1 25E	--		61			S	
07/05/60 1310	5050 5000	2.94 1150	8.8 109	75.9F 24.4C	8.1 8.0	184	--	--	9.6 .42 22	--	84 1.68	--	7.2 .20	--	.1 1E	--		74			S	
08/09/60 1305	5050 5000	3.38 1570	9.4 118	77.0F 25.0C	8.1 7.6	185	--	--	13 .57 30	--	82 1.64	--	4.8 .14	--	.1 10E	--		65			S	
09/06/60 1220	5050 5000	2.46 850	10.3 120	70.0F 21.1C	8.1 8.0	203	.14 .70 32	9.0 .74 34	16 .70 32	2.1 .05 2	93 1.86 84	8.0 .17 8	6.7 .19 9	.0 .00 0	.3 10E	.3 31.0	143	72 0	0.8 1.1			
10/11/60 1325	5050 5000	4.11 2250	9.1 94	59.0F 15.0C	7.7 7.8	189	--	--	14 .61 32	--	79 1.58	--	5.4 .15	--	.1 15E	--		64			S	
11/08/60 1330	5050 5000	3.84 2000	10.9 103	52.0F 11.1C	7.5 7.7	233	--	--	20 .87 38	--	84 1.68	--	7.0 .20	--	.1 6E	--		72			S	
12/13/60 1415	5050 5000	4.16 2370	12.9 103	39.9F 4.4C	7.9 7.7	251	--	--	21 .91 36	--	86 1.72	--	6.0 .17	--	.1 30E	--		81			S	
01/12/61 0845	5050 5000	4.74 3140	12.2 97	39.0F 3.9C	7.3 7.8	216	--	--	17 .74 34	--	90 1.80	14 .29	6.2 .17	--	.2 60E	--		73			S	
02/14/61 1400	5050 5000	6.59 6060	11.2 98	46.0F 7.8C	7.5 7.9	200	--	--	9.6 .42 19	--	85 1.70	13 .27	4.5 .13	--	.1 25E	--		87			S	
03/07/61 1330	5050 5000	5.02 3530	11.4 100	46.0F 7.8C	7.7 8.0	263	--	--	15 .65 24	--	98 1.96	--	3.9 .11	--	.1 15E	--		101			S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
* * * * *																					
F3 1430.00						KLAMATH R NR SEIAD VLY					F05C2 CONTINUED										
04/11/61 1415	5050 5000	5.38 4110	11.0 108	55.0F 12.8C	7.9 7.9	211	--	--	11 .48 22	--	79 1.58	23 .48	3.0 .08	--	.1 13E	--			85		S
05/09/61 1310	5050 5000	4.94 3420	10.1 103	57.9F 14.4C	8.3 8.0	223	.17 .85 36	9.6 .79 34	15 .65 28	1.7 .04 2	80 1.60 68	24 .50 21	8.7 .25 11	.7 .01 0	.1 2E	.1 20.0		145	82 2	0.7 1.0	
06/13/61 1350	5050 5000	5.00 3500	8.9 100	66.9F 19.4C	8.1 7.9	171	--	--	9.6 .42 23	--	73 1.46	--	3.9 .11	--	.0 13E	--			72		S
07/11/61 1800	5050 5000	3.10 1310	8.0 102	79.0F 26.1C	8.2 8.2	213	--	--	16 .70 32	--	84 1.68	--	5.0 .14	--	.1 2E	--			76		S
08/01/61 0645	5050 5000	3.51 1670	7.8 91	70.0F 21.1C	8.0 8.0	194	--	--	13 .57 29	--	84 1.68	--	5.5 .16	--	.0 --	--			69		S
09/12/61 0935	5050 5000	3.70 1860	8.9 98	64.9F 18.3C	7.9 7.9	195	.15 .75 35	8.1 .67 31	15 .65 31	2.4 .06 3	82 1.64 80	10 .21 10	6.2 .17 8	1.7 .03 1	.1 25E	.3 37.0		145	71 0	0.8 1.0	
10/03/61 1415	5050 5000	3.83 1110	9.7 105	63.0F 17.2C	7.7 7.9	196	--	--	16 .70 35	--	82 1.64	--	4.9 .14	--	.1 7E	--			64		S
11/14/61 0950	5050 5000	4.06 2250	11.5 98	44.1F 6.7C	7.6 7.8	229	--	--	19 .83 36	--	89 1.78	--	6.4 .18	--	.2 9E	--			74		S
12/05/61 1340	3050 5000	4.61 2950	11.7 98	43.0F 6.1C	7.5 7.9	272	--	--	23 1.00 36	--	100 2.00	--	8.2 .23	--	.2 4E	--			90		S
01/09/62 1145	5050 5000	4.46 2760	12.1 97	39.9F 4.4C	7.5 7.8	242	--	--	19 .83 33	--	93 1.86	--	6.5 .18	--	.1 10E	--			85		S
02/08/62 0910	5050 5000	5.61 4430	11.5 95	42.1F 5.6C	7.5 7.8	195	--	--	12 .52 25	--	84 1.68	--	6.0 .17	--	.1 60E	--			76		S
03/08/62 0900	5050 5000	5.09 3640	11.7 100	44.1F 6.7C	7.7 8.0	223	--	--	12 .52 22	--	97 1.94	--	4.8 .14	--	.1 20E	--			91		S

149

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CAC03	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH	ASAR	
* * * * *																			
F3		1430.00	KLAMATH R NR SEIAD VLY										F05C2 CONTINUED						
04/05/62	5050	6.00	10.2	52.0F	7.7	229	--	--	14	87	--	4.2	--	.0	--	92			
0805	5000	5050	97	11.1C	7.8														
									.61	1.74		.12		20E	--				S
									25										
05/16/62	5050	4.92	10.7	57.0F	8.3	230	16	11	15	2.0	84	25	8.5	.4	.0	.2	85	0.7	
1335	5000	3390	108	13.9C	8.1														
							.80	.90	.65	.05	1.68	.52	.24	.01	5E	22.0	150	1	1.0
							33	38	27	2	69	21	10	0					
06/13/62	5050	3.92	10.1	63.0F	8.1	200	--	--	11	79	--	5.5	--	.1	--	77			
1130	5000	2100	109	17.2C	8.1														
									.48	1.58		.16		4E	--				S
									24										
07/06/62	5050	2.95	9.9	72.0F	8.2	240	--	--	16	94	--	6.5	--	.1	--	89			
1255	5000	1180	118	22.2C	8.0														
									.70	1.88		.18		1E	--				S
									28										
08/14/62	5050	3.02	8.5	73.0F	8.2	229	--	--	17	95	--	7.0	.0	.1	--	82			
1210	5000	1240	102	22.8C	8.3														
									.74	1.90		.20	.00	1E	--				S
									31										
09/13/62	5050	3.23	10.1	66.9F	8.3	225	17	8.6	17	2.6	96	15	7.0	1.2	.0	.1	145	78	0.8
1135	5000	1430	114	19.4C	7.9														
							.85	.71	.74	.07	1.92	.31	.20	.02	5E	19.0	145	0	1.2
							36	30	31	3	78	13	8	1					
10/04/62	5050	3.79	10.9	62.1F	8.2	228	--	--	17	98	--	7.0	2.1	.1	--	81			
1230	5000	1970	117	16.7C	8.0														
									.74	1.96		.20	.03	4E	--				S
									31										
11/15/62	5050	5.79	10.7	48.9F	7.4	219	--	--	16	93	--	6.4	2.1	.0	--	75			
1210	5000	4550	97	9.4C	8.1														
									.70	1.86		.18	.03	10E	--				S
									32										
12/12/62	5050	6.48	12.2	43.0F	7.5	237	--	--	17	94	--	6.5	1.4	.2	--	85			
1220	5000	5640	102	6.1C	7.7														
									.74	1.88		.18	.02	15E	--				S
									30										
01/03/63	5050	6.01	12.2	43.0F	7.6	239	--	--	18	97	--	6.5	2.5	.0	--	84			
1203	5000	5120	102	6.1C	8.0														
									.78	1.94		.18	.04	5E	--				S
									32										
02/14/63	5050	6.28	11.7	45.0F	7.7	214	--	--	11	95	--	5.6	.9	.0	--	88			
1150	5000	5300	101	7.2C	7.9														
									.48	1.90		.16	.01	20E	--				S
									21										
03/06/63	5050	6.02	11.9	46.9F	7.9	253	--	--	17	101	--	5.8	1.7	.1	--	93			
1305	5000	4870	105	8.3C	7.9														
									.74	2.02		.16	.03	10E	--				S
									28										

MINERAL ANALYSES OF SURFACE WATER

151

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TH NCH	SAR ASAR	REM		
						CA	MG	NA	K	CACO3	SD4	CL	NO3	TURB	SI02	TDS SUM							

F3		1430.00		KLAMATH R NR SEIAD VLY										F05C2 CONTINUED									
04/08/64	5050	5.97	11.3	50.0F	8.0		--	--	17	--	95	--	5.0	2.9	.1	--			106				
1100	5000	5000	104	10.0C	8.4	279			.74		1.90		.14	.05	7E	--				S			
									26														
05/06/64	5050	4.20	11.5	50.0F	8.4		18	9.7	11	1.8	90	10	6.8	1.0	.1	.2	125	85	0.5				
1105	5000	2430	106	10.0C	8.0	205	.90	.80	.48	.05	1.80	.21	.19	.02	5E	22.0	134	0	0.7				
							40	36	22	2	81	9	9	1									
06/10/64	5050	4.54	10.2	60.1F	8.2		--	--	13	--	100	--	4.0	5.4	.2	--		88					
1135	5000	3000	107	15.6C	8.3	219			.57		2.00		.11	.09	6E	--				S			
									24														
07/07/64	5050	3.08	9.2	72.0F	8.4		--	--	15	--	97	--	3.0	1.1	.2	--		91					
1140	5000	1290	110	22.2C	8.4	283			.65		1.94		.08	.02	3E	--				S			
									26														
08/05/64	5050	3.00	9.4	72.0F	8.2		--	--	25	--	108	--	6.5	1.6	.2	--		101					
1105	5000	1240	112	22.2C	8.2	311			1.09		2.16		.18	.03	4E	--				S			
									35														
09/02/64	5050	3.31	9.7	64.0F	8.4		17	9.1	18	3.0	90	22	6.3	1.9	.1	--	164	80	0.9				
1130	5000	1500	106	17.8C	8.0	239	.85	.75	.78	.08	1.80	.46	.18	.03	7E	25.0	156	0	1.2				
							35	30	32	3	73	19	7	1									
10/06/64	5050	3.39	10.4	62.1F	8.2		--	--	16	--	98	--	6.5	1.6	.0	--		80					
1140	5000	1570	111	16.7C	7.7	239			.78		1.96		.18	.03	1E	--				S			
									33														
11/11/64	5050	4.07	11.0	50.0F	7.9		--	--	16	--	89	--	6.5	3.5	.3	--		78					
1135	5000	2270	102	10.0C	7.8	223			.70		1.78		.18	.06	1E	--				S			
									31														
12/08/64	5050	5.11	11.0	44.1F	7.8		--	--	19	--	94	--	5.7	4.7	.2	--		82					
1205	5000	3660	94	6.7C	8.2	246			.83		1.88		.16	.08	3E	--				S			
									34														
01/13/65	5050		11.8	39 F	7.5		--	--	11	--	75	--	3.3	4.1	.1	--		70					
1345	5000		93	4 C	8.2	182			.48		1.50		.09	.07	90E	--				S			
									26														
02/03/65	5050		10.1	42 F	7.6		--	--	8.6	--	69	--	2.1	3.3	.1	--		65					
1400	5000		84	6 C	8.1	166			.37		1.38		.06	.05	40E	--				S			
									22														
03/03/65	5050		10.8	44 F	7.7		--	--	11	--	65	--	2.0	2.3	.1	--		59					
1345	5000		92	7 C	8.1	162			.48		1.30		.06	.04	25E	--				S			
									29														

MINERAL ANALYSES OF SURFACE WATER

	DATE	SAMPLER	G.H.	DO	TEMP	FIELD							MILLIGRAMS PER LITER				MILLIGRAMS PER LITER												
	TIME	LAB	Q	SAT	LABORATORY	MINERAL CONSTITUENTS IN							MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE												
			DEPTH		PH	EC							CA	MG	NA	K	CACO3	SD4	CL	NO3					TURB	STD2	TDS	TH	SAR
	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*					
154	F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED																					
	04/04/66	5050		11.0	53	F	7.7		--	--	8.7	--	75		2.9	1.4	.1			78									
	1445	5000	6200	105	12	C	8.3	188			.38		1.50		.08	.02	15E	--											
											20											S							
	05/02/66	5050		10.7	59	F	8.2		15	7.9	9.8	1.3	77	10	2.4	1.0	.0	--	110	70	0.5								
	1515	5000	3540	110	15	C	8.0	176	.75	.65	.43	.03	1.54	.21	.07	.02	2E	16.0	110	0	0.7								
									40	35	23	2	84	11	4	1													
	06/08/66	5050		10.1	63	F	8.2		--	--	15	--	101	--	3.9	.5	.1	--		79									
	1045	5000	2160	109	17	C	8.2	218			.65		2.02		.11	.01	3E	--				S							
											29																		
	07/12/66	5050		8.8	68	F	8.2		--	--	21	--	115	--	5.4	1.1	.0	--		87									
	0900	5000	1160	100	20	C	8.4	254			.91		2.30		.15	.02	2E	--				S							
											34																		
	09/12/66	5050		10.0	62	F	8.2		15	10	24	3.0	88	29	6.0	3.4	.0	--	173	78	1.2								
	1140	5000	1480	107	17	C	7.9	261	.75	.82	1.04	.08	1.76	.60	.17	.05	2E	26.0	169	0	1.6								
								28	30	39	3	68	23	7	2														
10/31/66	5050	4.53	11.4	56	F	8.0		15	9.5	18	2.7	96	--	5.8	5.3	.1	--		76	0.9									
1535	5000	2050	113	13	C	8.2	227	.75	.78	.78	.07	1.92		.16	.09	2E	--		0	1.3									
								32	33	33	3										S								
01/04/67	5050		12.4	40	F	7.7		15	9.4	19	2.3	90	--	5.0	5.1	.1	--		76	0.9									
1640	5000	4170	100	4	C	8.1	228	.75	.77	.83	.06	1.80		.14	.08	10E	--		0	1.3									
								31	32	34	2										S								
03/09/67	5050	5.50	11.7	46.5F	8.2		17	9.9	14	1.5	92	--	4.2	1.6	.0	--		83	0.7										
1650	5000	3280	103	8.0C	7.9	216	.85	.81	.61	.04	1.84		.12	.03	15E	--		0	1.0		S								
							37	35	26	2																			
05/02/67	5050		12.4	53.5F	8.2		18	10	17	2.0	91	27	4.3	1.2	.0	--	162	86	0.8										
1225	5000	5020	120	11.9C	7.5	248	.90	.82	.74	.05	1.82	.56	.12	.02	5E	14.0	148	0	1.1										
							36	33	29	2	72	22	5	1															
07/05/67	5050		9.2	74.0F	8.4		--	--	10	--	79	--	4.3	.7	.2	--		76											
1420	5050	1710	112	23.3C	8.3	200			.44		1.58		.12	.01	4E	--					S								
									22																				
09/06/67	5050		9.5	69.5F	8.2		15	8.9	18	2.7	84	19	6.2	3.9	.2	--	161	74	0.9	E									
1025	5050	1550	110	20.8C	8.0	226	.75	.73	.78	.07	1.68	.40	.17	.06		--	124	0	1.2	T									
							32	31	33	3	73	17	7	3															
11/09/67	5050		10.6	52	F	7.8		--	--	20	--	97	--	6.5	4.3	.2	--		86										
0955	5050	2240	100	11	C	8.2	252			.87		1.94		.18	.07	2E	--				S								
										34																			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM					
										CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR			

F3		1430.00	KLAMATH R NR SEIAD VLY										F05C2 CONTINUED												
01/03/68	5050		13.6	35	F 7.5					17				90		4.7	6.4	.1							
1545	5050	2400	101	2	C 7.6	226				.74				1.80		.13	.10	5E			76				
										33													S		
03/06/68	5050		11.3	45.5F	7.6					10				81		4.4	3.2	.1			76				
1400	5050	5570	98	7.5C	8.1	203				.44				1.62		.12	.05	30E							
										22													S		
05/06/68	5050		11.1	56	F 8.4		15	8.9	10	1.7				77	9.9	4.3	.4	.1		110	74	0.5			
1450	5050	2410	110	13	C 8.1	189	.75	.73	.44	.04				1.54	.21	.12	.01	2E		96	0	0.7			
							38	37	22	2				82	11	6	1								
07/03/68	5050		10.0	75	F 8.4					15				94		5.6	.1	.1							
1600	5050	1040	123	24	C 9.4	223				.65				1.88		.16	.00	5E			84				
										28													S		
09/04/68	5050		10.4	71	F 8.4		15	8.9	17	2.6				90	14	7.4	1.6	.0		128	74	0.9			
1530	5050	1130	123	22	C 8.0	225	.75	.73	.74	.07				1.80	.29	.21	.03	3E		120	0	1.2			
							33	32	32	3				77	12	9	1								
11/13/68	5050		12.2	49	F 8.0					17				96		6.9	4.0	.1							
1525	5050	2080	111	9	C 8.3	234				.74				1.92		.19	.06	8E			82				
										31													S		
12/10/68	5050		11.4	46	F 7.7					16				89		6.0	4.0	.1							
1400	5050	4040	100	8	C 7.9	226				.70				1.78		.17	.06	40E			86				
										29													S		
01/20/69	5050		13.0	38	F 7.6					13				92		5.7	3.6	.0							
1510	5050	6640	101	3	C 8.1	218				.57				1.84		.16	.06	210E			99				
										22													S		
02/17/69	5050		12.4	42	F 7.8					14				98		4.9	4.5	.0							
1305	5050	6050	103	6	C 8.1	236				.61				1.96		.14	.07	45E			98				
										24													S		
03/10/69	5050		13.0	43	F 7.9					13				108		5.0	3.7	.1							
1530	5050	3440	109	6	C 7.6	254				.57				2.16		.14	.06	20E			105				
										21													S		
04/08/69	5050		11.4	51	F 8.2					13				76		3.4	3.6	.0							
1400	5050	11000	107	11	C 7.5	211				.57				1.52		.10	.06	40E			78				
										27													S		
05/12/69	5050		10.8	58	F 8.0		10	6.3	5.1	.7				52	6.4	4.1	.9	.0		80	51	0.3			
1345	5050	9400	110	14	C 7.5	122	.50	.52	.22	.02				1.04	.13	.12	.01	90E		65	0	0.3			
							40	41	17	2				80	10	9	1								

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER					MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	PERCENT CACO3	SO4	CL	NO3	B TURB	F SI02	TDS SUM	TH NCH	SAR ASAR			

F3		1430.00	KLAMATH R NR SEIAD VLY					F05C2 CONTINUED													
06/09/69	5050		10.3	61	F 7.7		--	--	7.0	--	66	--	3.8	.8	.1	--			61		
1625	5050	3980	109	16	C 7.8	150			.30		1.32		.11	.01	45E	--				S	
									20												
07/07/69	5050		10.0	71	F 8.5		--	--	11	--	88	--	4.5	.4	.0	--			85		
1530	5050	1560	118	22	C 8.3	202			.48		1.76		.13	.01	7E	--				S	
									22												
08/12/69	5050		10.2	74	F 8.4		--	--	22	--	98	--	6.8	1.2	.1	--			92		
1415	5050	1300	124	23	C 8.4	272			.96		1.96		.19	.02	10E	--				S	
									34												
09/16/69	5050		9.0	62	F 7.8		17	8.6	27	2.7	97	24	6.9	2.2	.1	--	148	78	1.3		
0805	5050	1530	96	17	C 9.1	265	.85	.71	1.17	.07	1.94	.50	.19	.04	0E	--	147	0	1.9		
							30	25	42	3	73	19	7	1							
10/14/69	5050		12.0	57	F 8.4		--	--	20	--	100	--	6.4	3.9	.2	--			86		
1420	5050	1750	121	14	C 8.1	258			.87		2.00		.18	.06	2E	--				S	
									34												
11/17/69	5050		11.6	48	F 8.2		--	--	19	--	87	--	6.1	3.5	.1	--			76		
1240	5050	3350	104	9	C 7.8	227			.83		1.74		.17	.06	5E	--				S	
									35												
12/08/69	5050		12.7	43	F 7.6		--	--	16	--	86	--	7.4	5.6	.2	--			71		
1540	5050	2990	107	6	C 7.8	212			.70		1.72		.21	.09	5E	--				S	
									33												
01/12/70	5050		12.8	40	F 7.6		--	--	17	--	90	--	4.7	3.9	.2	--			81		
1255	5050	4280	103	4	C 6.4	224			.74		1.80		.13	.06	15E	--				S	
									31												
02/09/70	5050		12.9	46	F 7.6		--	--	12	--	89	--	3.0	3.1	.1	--			73		
1350	5050	9190	113	8	C 7.6	186			.52		1.78		.08	.05	45E	--				S	
									26												
03/09/70	5050		12.7	46	F 7.8		--	--	13	--	89	--	4.3	.4	.2	--			78		
1250	5050	8840	111	8	C 8.3	208			.57		1.78		.12	.01	45E	--				S	
									27												
04/14/70	5050		12.8	49	F 8.2		--	--	15	--	104	--	6.5	.3	.1	--			90		
1430	5050	3280	117	9	C 8.5	231			.65		2.08		.18	.00	9E	--				S	
									27												
05/12/70	5050		12.8	49	F 8.3		10	17	17	2.4	103	21	4.3	1.4	.1	--	170	96	0.8		
1630	5050	3130	117	9	C 7.8	256	.50	1.40	.74	.06	2.06	.44	.12	.02	5E	--	135	0	1.2	T	
							19	52	27	2	78	17	5	1							

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR	REM

F3 1430.00 KLAMATH R NR SEIAD VLY										F05C2 CONTINUED									
06/16/70	5050		11.0	65	F 8.4			16		100		6.6	1.8	.2					
1400	5050	1910	122	18	C 8.3	252		.70		2.00		.19	.03	3E			97		S
								27											
07/13/70	5050		10.8	71	F 8.2			21		107		6.5	.1	.2			101		S
1230	5050	1100	127	22	C 8.3	276		.91		2.14		.18	.00	3E					
								31											
08/03/70	5050		10.2	72	F 8.4			24		103		7.7		.2			98		S
1325	5050	1280	122	22	C 7.7	300		1.04		2.06		.22		2E					
								35											
08/31/70	5050		11.2	74	F 8.4		16	13	26	3.2	105	36	8.1	.1	.2		186	95	1.2
1355	5050	1170	136	23	C 8.3	307	.80	1.07	1.13	.08	2.10	.75	.23	.00	8E		166	0	1.8
							26	35	37	3	68	24	7	0					
10/06/70	5050		11.9	57	F 8.4			19		103		7.4	1.2	.2			86		S
1245	5050	1560	120	14	C 7.9	248		.83		2.06		.21	.02	2E					
								33											
11/16/70	5050		11.2	48.2F	7.9			24		98		8.0	3.5	.1			89		S
1345	5050	4040	101	9.0C	7.7	267		1.04		1.96		.23	.06	6E					
								37											
12/14/70	5050		11.5	39	F 7.3														
1350	0000	8030E	91	4	C														
01/12/71	5050		12.9	37	F 7.3			15		91		6.1	3.1	.2			91		S
1415	5050	5740	99	3	C 8.0	230		.65		1.82		.17	.05	7E					
								26											
02/17/71	5050		12.3	43	F 7.7			11		84		4.9	1.2	.1			78		S
1215	5050	5910	103	6	C 7.9	196		.48		1.68		.14	.02	12E					
								24											
03/15/71	5050		12.4	43	F 7.9			11		89		4.1	.8	.2			86		S
1415	5050	7160	104	6	C 8.3	210		.48		1.78		.12	.01	19E					
								22											
04/13/71	5050		10.8	50	F 7.6			8.9		75		2.8	.6	.0			76		S
1145	5050	10800	100	10	C 7.9	172		.39		1.50		.08	.01	55E					
								20											
05/10/71	5050		11.4	55	F 7.8		12	6.4	7.4	1.3	62	5.6	1.0	.7	.0		95	55	0.4
1450	5050	12700	113	13	C 7.9	143	.60	.53	.32	.03	1.24	.12	.03	.01	11E		72	0	0.5
							41	36	22	2	89	9	2	1					T

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER							
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	SAR ASAR	REM		

F3 1430.00				KLAMATH R NR SEIAD VLY						F05C2 CONTINUED											
11/16/71 1445	5050 5050		12.6 107	43.7F 6.5C	7.5 7.6	202 212	--	--	17 .74 33	--	80 1.60	--	4.1 .12	3.6 .06	.1 5E	--		74			
12/06/71 1130	5050 5050	6820	11.6 97	42.8F 6.0C	7.3 7.4	207 210	--	--	16 .70 33	--	77 1.54	--	4.1 .12	6.0 .10	.1 15E	--		70			
01/04/72 1415	5050 0000	4110	14.0 104	34.7F 1.5C	7.5	213	--	--	--	--	--	--	--	--	5E	--					
02/02/72 1120	5050 0000	5800	13.4 102	36.5F 2.5C	7.4	181	--	--	--	--	--	--	--	--	20E	--					
03/06/72 1335	5050		11.5	45.0F	7.6	159	--	--	9.7	--	68	--	2.9	2.1	.0	--		66			
	5050	24400	99	7.2C	7.4	162			.42 24		1.36		.08	.03	68A	--					
04/05/72 1145	5050		10.6	50.9F	7.6	158	--	--	8.8	--	66	--	1.9	--	.1	--		63			
	5050	8310	99	10.5C	7.6	162			.38 23		1.32		.05	--	14A	--					
05/17/72 0930	5050 0000	5500	10.2 101	55 F 13 C	7.9	171	--	--	--	--	--	--	--	--	4A	--					
06/14/72 1345	5050		10.4	70.0F	8.3	198	--	--	--	--	--	--	--	--	--	--					
	5050		121	21.1C		194									3AF	--					
06/14/72 2015	5050		8.4	66.2F	8.3	208	--	--	--	--	--	--	--	--	--	--					
	5050		94	19.0C		177									2AF	--					
06/15/72 0340	5050		8.0	66.0F	8.0	208	--	--	--	--	--	--	--	--	--	--					
	5050		89	18.9C		182									3AF	--					
06/15/72 0815	5050		8.9	64.9F	7.9	208	--	--	--	--	--	--	--	--	--	--					
	5050		98	18.3C		182									3AF	--					
06/15/72 1030	5050		9.8	64.8F	8.1		--	--	--	--	--	--	--	--	--	--					
	0000	2420	108	18.2C																	

[illegible]

F05C2 CONTINUED

160

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM
					PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				B TURB	F SI02	TDS SUM	TH NCH		
											CAC03	SO4	CL	NO3						
* * * * *																				
F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED													
03/13/73 1545	5050 5050	4080	11.1 95	44.6F 7.0C	7.9 7.7	218	--	--	16 .70 31	--	82 1.64	--	4.5 .13	--	.0 2A	--		77		
04/11/73 1130	5050 5050	2690E	10.0 94	51.8F 11.0C	7.8	196	--	--	--	--	--	--	--	--	2AF	--				
05/16/73 1000	5050 5050	2800	9.5 97	58.1F 14.5C	7.6	140	--	--	--	--	--	--	--	--	7AF	--				
06/14/73 0930	5050 5050	1350	9.6 102	61.7F 16.5C	7.9	216	--	--	--	--	--	--	--	--	1AF	--				
07/02/73 1400	5050 5050	1010	10.0 119	71.6F 22.0C	8.2	234	--	--	--	--	--	--	--	--	1AF	--				
08/08/73 1045	5050 5050	828	10.8 128	71.6F 22.0C	8.4	207	--	--	--	--	--	--	--	--	2AF	--				
09/07/73 0910	5050 5050	830E	10.7 117	64.4F 18.0C	8.4 7.8	208 211	--	--	17 .74 33	--	86 1.72	--	6.8 .19	--	.2 0A	--		76		
10/15/73 1120	5050 5050	1530	13.4 137	58.1F 14.5C	8.0 7.8	274 278	--	--	21 .91 34	--	111 2.22	--	6.9 .19	--	.1 1A	--		90		
11/15/73 1105	5050 5050	6130	13.0 116	47.3F 8.5C	8.1 8.1	181 180	14 .70 37	9.2 .76 40	9.4 .41 21	1.4 .04 2	76 1.52	8.2 .17	4.3 .12	--	.1 13A	--	120 92	73 0	0.5 0.6	
12/04/73 1325	5050 5050	6780	12.9 108	42.8F 6.0C	7.5	197	--	--	--	--	--	--	--	--	9AF	--				
01/14/74 1425	5050 5050	12340	12.5 102	41.0F 5.0C	7.4 7.4	160 159	--	--	8.4 .37 23	--	67 1.34	--	2.5 .07	--	.1 110A	--		61		
02/05/74 1210	5050 5050	8930	14.1 115	41.0F 5.0C	7.5	189	--	--	--	--	--	--	--	--	20AF	--				

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				REMARKS	
					LABORATORY PH	EC	PERCENT REACTANCE VALUE				PERCENT REACTANCE VALUE				TDS		TH			SAR
							CA	MG	NA	K	CA	MG	NA	K	SUM	NCH	ASAR			
F3 1430.00 KLANATH R NR SEIAD VLY F05C2 CONTINUED																				
03/18/75 1505	5050 5050	14900	12.1 93	37.4F 3.0C	7.7 7.7	172 187	--	--	9.8 .43 22	--	77 1.54	--	3.8 .11	--	.0 40A	--	78			
04/15/75 1230	5050 0000	7730	11.3 102	48.2F 9.0C	8.1	208	--	--	--	--	--	--	--	--	15AF	--		S		
05/05/75 1420	5050 0000	8710	10.7 99	50.0F 10.0C	8.0	195	--	--	--	--	--	--	--	--	10AF	--				
06/03/75 1215	5050 5050	9970	9.5 100	60.8F 16.0C	7.8 7.8	116 114	--	--	4.9 .21 18	--	49 .98	--	4.2 .12	--	.0 25A	--	47	S		
07/18/75 0735	5050 0000	2420	8.2 91	65.3F 18.5C	7.9	211	--	--	--	--	--	--	--	--	3AF	--		S		
08/06/75 1135	5050 0000	1470	10.0 116	69.8F 21.0C	8.3	201	--	--	--	--	--	--	--	--	8AF	--		S		
09/18/75 0900	5050 0000	1920	9.1 96	60.8F 16.0C	8.0	226	--	--	--	--	--	--	--	--	2AF	--		S		
10/15/75 1100	5050 0000	3200	10.0 103	59.0F 15.0C	7.9	241	--	--	--	--	--	--	--	--	4AF	--		S		
11/06/75 0750	5050 0000	3990	10.8 98	49.0F 9.4C	7.7	192	--	--	--	--	--	--	--	--	5AF	--		S		
12/02/75 1230	5050 5050	5130	11.9 102	44.6F 7.0C	7.6 8.1	162 184	--	--	13 .57 31	--	72 1.44	--	2.5 .07	--	.1 2A	--	62	S		
01/08/76 0945	5050 0000	4500	11.3 95	42.8F 6.0C	7.4	206	--	--	--	--	--	--	--	--	7AF	--				
02/03/76 1045	5050 0000	4050	11.6 95	41.0F 5.0C	7.6	218	--	--	--	--	--	--	--	--	6AF	--				

163

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	B SIO2	F	TDS SUM	TH NCH	SAR ASAR	REM

F3 1430.00			KLAMATH R NR SEIAD VLY										F05C2 CONTINUED							
03/12/76 0900	5050 0000	3960	11.9 97	41.0F 5.0C	7.4 202	--	--	--	--	--	--	--	--	--	--	8AF	--			
04/13/76 1100	5050 0000	3330	11.0 102	50.0F 10.0C	8.0 223	--	--	--	--	--	--	--	--	--	--	3AF	--			
05/11/76 1245	5050 0000	3950	10.4 105	57.2F 14.0C	8.2 141	--	--	--	--	--	--	--	--	--	--	5AF	--			
06/02/76 1045	5050 0000	1990	10.5 106	57.2F 14.0C	8.2 179	--	--	--	--	--	--	--	--	--	--	1AF	--			
07/08/76 0845	5050 0000	1100	9.5 108	68.0F 20.0C	8.0 195	--	--	--	--	--	--	--	--	--	--	2AF	--			
08/10/76 1045	5050 0000	1320	10.1 120	71.6F 22.0C	8.1 218	--	--	--	--	--	--	--	--	--	--	2AF	--			
09/03/76 0715	5050 0003	1600E	8.5 95	66.2F 19.0C	7.6 204	--	--	--	--	--	--	--	--	--	--	2AF	--			
10/14/76 1100	5050 0000	2120	10.7 110	59.0F 15.0C	8.2 280	--	--	--	--	--	--	--	--	--	--	2AF	--			
11/10/76 0825	5050 0000	3440	11.2 106	51.8F 11.0C	7.7 228	--	--	--	--	--	--	--	--	--	--	2AF	--			
12/07/76 0815	5050 5050	2600	12.8 106	42.0F 5.6C	7.7 218 8.0 223	--	--	18 .78 36	--	81 1.62	--	6.4 .18	--	.2 4A	--			70		
01/07/77 1130	5050 0000	1940	13.2 99	35.6F 2.0C	7.8 213	--	--	--	--	--	--	--	--	--	--	5AF	--			
02/02/77 1100	5050 5050	1880	13.6 108	39.2F 4.0C	8.0 215	--	--	--	--	--	--	--	--	--	--	5AF	--			

164

S

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM	
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				B TURB	F SIO2	TDS SUM	TH NCW	SAR ASAR		
											CACO3	SO4	CL	NO3							
F3 1430.00 KLAMATH R NR SEIAD VLY F05C2 CONTINUED																					
03/01/77 1445	5050 0000	1740	13.1 115	46.4F 8.0C	8.4	208	--	--	--	--	--	--	--	--	--	1AF	--				
04/13/77 1145	5050 5050	1140	12.7 128	57.2F 14.0C	8.4	226	--	--	--	--	--	--	--	--	--	3AF	--				
05/12/77 0915	5050 5050	1540	10.9 108	55.4F 13.0C	8.2 7.3	342 340	--	--	24 1.04 30	--	123 2.46	--	8.4 .24	--	.2 14	--		122			S
06/07/77 1005	5050 5050	1250	8.8 104	71.6F 22.0C	8.0	251	--	--	--	--	--	--	--	--	5AF	--				S	
07/07/77 0755	5050 0000	894	8.3 95	68.0F 20.0C	8.1	288	--	--	--	--	--	--	--	--	2AF	--				S	
08/02/77 1000	5050 5050	806	9.2 114	76.1F 24.5C	8.0	243	--	--	--	--	--	--	--	--	1AF	--				S	
09/13/77 1515	5050 5050	799	10.2 121	71.6F 22.0C	8.8	205	--	--	--	--	--	--	--	--	1AF	--				S	
10/04/77 1015	5050 5050	1620	9.9 102	59.0F 15.0C	8.0	218	--	--	--	--	--	--	--	--	4AF	--				S	
11/16/77 0925	5050 5050	1750	11.0 103	50.9F 10.5C	7.9	231	--	--	--	--	--	--	--	--	2AF	--				S	
12/05/77 1115	5050 0000	3540	10.0 87	45.5F 7.5C	7.9	227	--	--	--	--	--	--	--	--	2AF	--				S	
01/05/78 1015	5050 5050	6790	11.2 91	41.0F 5.0C	7.9	183	--	--	--	--	--	--	--	--	14AF	--				S	
02/06/78 1045	5050 5050	7060	11.1 93	42.8F 6.0C	7.6 8.0	170 184	--	--	11 .48 25	--	78 1.56	--	3.1 .09	--	.0 14A	--		73			S

165

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH			

F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED													
03/08/79 1420	5050 5050		11.7 107	49.1F 9.5C	7.9 192	--	--	--	--	--	--	--	--	--	5AF	--				
04/12/79 0915	5050 5050	2631	10.6 98	50.0F 10.0C	7.9 224	--	--	--	--	--	--	--	--	--	3AF	--				
05/01/79 1340	5050 5050	3066	11.0 113	59.0F 15.0C	8.3 197	--	--	--	--	--	--	--	--	--	2AF	--				
06/12/79 0950	5050 5050	5776	9.0 102	67.1F 19.5C	8.3 202	--	--	--	--	--	--	--	--	--	0AF	--				
07/16/79 1320	5050 5050	1020	9.4 119	77.9F 25.5C	8.3 209	--	--	--	--	--	--	--	--	--	1AF	--				
08/14/79 0955	5050 5050	1150	8.8 102	69.8F 21.0C	8.1 182	12 .60 34	7.0 .58 32	14 .61 34	--	73 1.46	--	4.0 .11	--	.1 0A	--		59 0	0.8 0.9	S	
09/11/79 1440	5050 5050	1420	10.5 121	68.9F 20.5C	8.7 193	12 .60 31	8.0 .66 35	15 .65 34	--	76 1.52	--	4.0 .11	--	.1 0A	--		63 0	0.8 1.0	S	
10/11/79 1010	5050 5050	1490	9.7 103	61.7F 16.5C	8.1 226	--	--	--	--	--	--	--	--	--	2AF	--				
11/13/79 1435	5050 5050	1900	11.5 105	49.1F 9.5C	7.8 217	--	--	--	--	--	--	--	--	--	2AF	--				
12/06/79 1045	5050 5050	4360	11.5 99	44.6F 7.0C	8.0 203	--	--	--	--	--	--	--	--	--	5AF	--				
01/07/80 1350	5050 5050	3330	12.2 103	43.7F 6.5C	8.1 235	--	--	--	--	--	--	--	--	--	4AF	--				
02/14/80 1055	5050 5050	3810	11.9 100	42.8F 6.0C	7.9 221	--	--	--	--	--	--	--	--	--	7AF	--				

168

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM		
					PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	SI02	TDS SUM	TH NCH				

F3		1430.00			KLAMATH R NR SEIAD VLY				F05C2 CONTINUED													
03/11/80 1520	5050 5050		11.0 107	54.5F 12.5C	7.9	210	--	--	--	--	--	--	--	--	--	--	--					
		5720													5AF	--						
04/17/80 0910	5050 5050		11.0 107	54.5F 12.5C	7.9	233	--	--	--	--	--	--	--	--	--	--	--					
		3980													3AF	--						
05/06/80 1250	5050 5050		10.6 109	59.0F 15.0C	8.2	177	--	--	--	--	--	--	--	--	--	--	--					
		5660													5AF	--						
06/11/80 1030	5050 5050		10.2 110	62.6F 17.0C	8.2	211	--	--	--	--	--	--	--	--	--	--	--					
		2150													2AF	--						
07/16/80 1310	5050 5050		10.0 123	75.2F 24.0C	8.4	234	--	--	--	--	--	--	--	--	--	--	--					
		880E													1AF	--						
08/13/80 1810	5050 5050		9.0 111	75.2F 24.0C	8.7 7.9	217 234	15 .75 32	9.0 .74 32	18 .78 33	2.8 .07 3	89 1.78	-- 7.0 .20	-- --	.1 2A	-- --	-- --	74 0	0.9 1.2				
																		S				
09/02/80 1535	5050 5050		10.5 125	71.6F 22.0C	8.6	207	--	--	--	--	--	--	--	--	--	--	--					
		1490													2AF	--						
10/16/80 0800	5050 5050		9.3 90	53.6F 12.0C	7.9	255	--	--	--	--	--	--	--	--	--	--	--					
		1660													2AF	--						
11/03/80 1500	5050 5050		11.4 113	55.4F 13.0C	8.4	234	--	--	--	--	--	--	--	--	--	--	--					
		1690													2AF	--						
12/10/80 0925	5050 5050		10.9 90	41.9F 5.5C	8.3 7.9	235 234	16 .80 32	10 .82 33	18 .78 32	2.6 .07 3	93 1.86	-- 7.0 .20	-- --	.1 5A	-- --	-- --	81 0	0.9 1.2				
																		S				
01/05/81 1420	5050 5050		12.0 103	44.6F 7.0C	7.9	210	--	--	--	--	--	--	--	--	--	--	--					
		2430													4AF	--						
																		S				
02/04/81 1005	5050 5050		11.9 96	40.1F 4.5C	7.7	238	--	--	--	--	--	--	--	--	--	--	--					
		2330													5AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB		F		TDS	TH	SAR		
										CACO3	SO4	CL	NO3			SI02	SUM	NCH	ASAR			
*****																					*****	
F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED															
03/03/81	5050		11.8	47.3F	8.1	243	--	--	--	--	--	--	--	--	--	--	--					
1405	5050	3070	105	8.5C												5AF	--					
																					S	
04/08/81	5050		10.9	51.8F	7.8	247	18	10	15	2.2	91	--	5.0	--	.1	--		86	0.7			
0850	5050	2240	103	11.0C	7.8	247	.90	.82	.65	.06	1.82		.14		3A	--		0	1.0			
																					S	
05/12/81	5050		10.1	64.4F	8.3	201	--	--	--	--	--	--	--	--	--	--	--					
1435	5050	1730	111	18.0C											2AF	--						
06/03/81	5050		9.3	66.2F	8.0	221	--	--	--	--	--	--	--	--	--	--	--					
0905	5050	1275	104	19.0C											2AF	--						
07/21/81	5050		9.3	79.7F	8.4	231	--	--	--	--	--	--	--	--	--	--	--					
1425	5050	839	120	26.5C											1AF	--						
08/18/81	5050		10.0	75.2F	8.2	220	--	--	--	--	--	--	--	--	--	--	--					
1200	5050	1080	123	24.0C											4AF	--						
09/02/81	5050		10.0	74.3F	8.3	215	--	--	--	--	--	--	--	--	--	--	--					
1435	5050	1350	122	23.5C											2AF	--						
10/02/81	5050		8.2	61.7F	7.9	241	--	--	--	--	--	--	--	--	--	--	--					
0955	5050	1030	87	16.5C											2AF	--						
11/17/81	5050		11.2	46.9F	7.5	140	11	8.0	7.0	1.8	55	--	4.0	--	.2	--		60	0.4			
1500	5050	700	99	8.3C	7.7	136	.55	.66	.30	.05	1.10		.11		170A	--		6	0.4			
																					S	
12/10/81	5050		11.4	45.9F	7.8	180	--	--	--	--	--	--	--	--	--	--	--					
0800	5050	5960	99	7.5C											8AF	--						
																					S	
01/25/82	5050		12.5	41.9F	7.6	225	18	10	14	2.1	90	--	5.0	--	.1	--		86	0.7			
1445	5050	5280	103	5.5C	7.6	231	.90	.82	.61	.05	1.80		.14		8A	--		0	0.9			
																					S	
02/10/82	5050		12.3	41.0F	7.7	249	--	--	--	--	--	--	--	--	--	--	--					
1400	5050	4780	100	5.0C											8AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR		

F3		1430.00	KLAMATH R NR SEIAD VLY				F05C2 CONTINUED													
03/24/82 1605	5050 5050	7230	11.5 105	49.0F 9.4C	7.8 212	--	--	--	--	--	--	--	--	--	15AF	--				
04/20/82 0730	5050 5050	11600	11.3 99	46.4F 8.0C	8.1 170	--	--	--	--	--	--	--	--	--	21AF	--				
05/13/82 1010	5050 5050	5620	10.6 108	58.1F 14.5C	8.0 165	--	--	--	--	--	--	--	--	--	6AF	--				
06/15/82 0920	5050 5050	3200E	9.6 105	64.4F 18.0C	8.0 181	--	--	--	--	--	--	--	--	--	3AF	--				
07/07/82 1500	5050 5050	4520	9.2 105	68.0F 20.0C	8.1 216	--	--	--	--	--	--	--	--	--	2AF	--				
08/06/82 0850	5050 5050	1420	8.6 100	69.8F 21.0C	8.0 231	--	--	--	--	--	--	--	--	--	3AF	--				
09/13/82 1545	5050 5050	1560	9.8 112	68.0F 20.0C	8.4 230 239	15 .75 30	10 .82 33	19 .83 34	2.7 .07 3	92 1.84	--	6.0 .17	--	.1 3A	--		78 0	0.9 1.3		S
10/13/82 1215	5050 5050	2220	11.4 116	58.1F 14.5C	8.2 250	--	--	--	--	--	--	--	--	--	2AF	--				
11/17/82 0850	5050 5050	3640	10.9 95	45.5F 7.5C	7.9 206	--	--	--	--	--	--	--	--	--	4AF	--				
12/06/82 1335	5050 5050	7320	11.9 100	42.8F 6.0C	7.5 170 173	12 .60 33	8.0 .66 36	12 .52 28	1.9 .05 3	69 1.38	--	4.0 .11	--	.1 5A	--		63 0	0.7 0.8		S
01/10/83 1435	5050 5050	5300	13.2 103	38.3F 3.5C	7.8 198 197	15 .75 36	10 .82 39	11 .48 23	1.7 .04 2	84 1.68	--	4.0 .11	--	.0 7A	--		78 0	0.5 0.7		S
03/22/83 1440	5050 5050	12900	11.3 99	46.4F 8.0C	7.7 193	--	--	--	--	--	--	--	--	--	19AF	--				S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2							

F3		1430.00	KLANATH R NR SEIAD VLY					F05C2 CONTINUED														
04/25/83 1625	5050 0000	8140	11.5 105	49.1F 9.5C	8.0	191	--	--	--	--	--	--	--	--	--	9AF	--					S
05/17/83 1350	5050 5050	7880	11.5 115	56.3F 13.5C	8.0	171 174	14 .70 38	8.0 .66 36	10 .44 24	1.7 .04 2	70 1.40	--	2.0 .06	--	.1 3A	--		68 0	0.5 0.6		S	
06/15/83 1535	5050 5050		9.7 103	61.7F 16.5C	8.0	130	--	--	--	--	--	--	--	--	11AF	--						
07/19/83 1300	5050 5050	2140	10.5 115	64.4F 18.0C	8.3	178	--	--	--	--	--	--	--	--	2AF	--						
08/18/83 1035	5050 5050	1530	9.0 107	71.6F 22.0C	8.6	226	--	--	--	--	--	--	--	--	3AF	--						
09/12/83 1240	5050 5050	2040	10.2 118	68.9F 20.5C	8.2	223 224	15 .75 33	10 .82 36	16 .70 31	--	90 1.80	--	5.0 .14	--	.1 4A	--		78 0	0.8 1.1		S	
10/20/83 0810	5050 5050	3460	9.5 95	56.3F 13.5C	7.5	210	--	--	--	--	--	--	--	--	4AF	--						
11/14/83 1350	5050 5050	5140	11.3 102	48.2F 9.0C	7.6	196	--	--	--	--	--	--	--	--	6AF	--						
12/15/83 1515	5050 5050	22400	11.4 98	44.6F 7.0C	7.4	167	--	--	--	--	--	--	--	--	33AF	--						
01/17/84 1435	5050 5050	6080	11.4 88	37.4F 3.0C	7.4	193	--	--	--	--	--	--	--	--	6AF	--						
02/22/84 1450	5050 5050	7920	12.8 107	42.8F 6.0C	7.8	243 249	18 .90 35	11 .90 35	17 .74 29	--	96 1.92	--	5.0 .14	--	.1 13A	--		90 0	0.8 1.1		S	
03/20/84 1350	5050 5050	11700	10.8 100	50.0F 10.0C	7.6	204	--	--	--	--	--	--	--	--	9AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIGRAMS PER LITER				SAR	REM
					LABORATORY PH	EC	MILLIEQUIVALENTS PER LITER				PERCENT REACTANCE VALUE				TDS		TH	ASAR		
							CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02				

F3 1430.00		KLAMATH R NR SEIAD VLY										F05C2 CONTINUED								
04/11/84	5050			50.0F	7.9	157	--	--	--	--	--	--	--	--	--					
1545	5050			10.0C										7AF	--					
04/18/84	5050		10.9	50.0F	7.7	163	13	8.0	10	--	69	--	3.0	--	.1	--	66	0.5		
1005	5050		101	10.0C	8.0	170	.65	.66	.44		1.38	--	.08	--	7A	--	0	0.6	S	
							37	38	25											
05/16/84	5050		10.5	52.0F	7.7	160	--	--	--	--	--	--	--	--	--					
0405	5050		99	11.1C		151								5AF	--					
05/16/84	5050		10.4	50.9F	7.6	150	--	--	--	--	--	--	--	--	--					
0800	5050		97	10.5C		153								5AF	--				S	
05/16/84	5050		10.7	54.0F	7.8	158	--	--	--	--	--	--	--	--	--					
1200	5050		104	12.2C		154								5AF	--					
05/16/84	5050		10.5	56.5F	7.9	154	--	--	--	--	--	--	--	--	--					
1610	5050		105	13.6C		150								5AF	--				S	
05/16/84	5050		9.8	57.2F	8.0	150	--	--	--	--	--	--	--	--	--					
2230	5050		99	14.0C		157								5AF	--				S	
05/17/84	5050		9.8	55.9F	8.0	140	--	--	--	--	--	--	--	--	--					
0430	5050		97	13.3C		152								5AF	--					
05/17/84	5050		10.0	55.4F	7.5	155	--	--	--	--	--	--	--	--	--					
0810	5050		99	13.0C		153								6AF	--					
05/17/84	5050		10.6	57.9F	7.8	150	--	--	--	--	--	--	--	--	--					
1205	5050		108	14.4C		150								6AF	--				S	
05/17/84	5050		10.1	59.0F	8.0	158	--	--	--	--	--	--	--	--	--					
1610	5050		104	15.0C		147								5AF	--					
05/17/84	5050		9.9	59.0F	8.1	150	--	--	--	--	--	--	--	--	--					
2015	5050		102	15.0C		152								5AF	--				S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN						MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACD3	SD4	CL	NO3	B TURB	F SID2	TDS SUM	TH NCH	SAR ASAR				

F3		1430.00	KLAMATH R NR SEIAD VLY										F05C2 CONTINUED									
05/18/84	5050		10.3	56.3F	7.6	147	11	7.0	10	--	64	--	3.0	--	.1	--		56	0.6			
1045	5050	7200	103	13.5C	7.8	154	.95	.58	.44		1.28	--	.08	--	5A	--		0	0.6		S	
							35	37	28													
06/12/84	5050		9.8	66.2F	8.1	146	--	--	--	--	--	--	--	--	--	--						
1400	5050	4560	110	19.0C											3AF	--						
07/10/84	5050		9.4	73.4F	8.3	194	--	--	--	--	--	--	--	--	--	--						
1400	5050	1400	114	23.0C											1AF	--						
08/07/84	5050		11.1	75.2F	8.2	219	--	--	--	--	--	--	--	--	--	--						
1430	5050	1300	137	24.0C											2AF	--						
08/30/84	5050		9.2	68.9F	8.1	220	15	9.0	16	--	84	--	5.0	--	.1	--		74	0.8			
1020	5050		106	20.5C	8.0	220	.75	.74	.70		1.68	--	.14	--	2A	--		0	1.1		S	
							34	34	32													
09/04/84	5050		9.4	71.6F	8.3	215	--	--	--	--	--	--	--	--	--	--						
1330	5050	2030	112	22.0C											4AF	--						
10/01/84	5050		10.5	62.1F	8.1	256	--	--	--	--	--	--	--	--	--	--						
1130	5050		112	16.7C											2AF	--						
10/01/84	5050		10.4	62.1F	8.1	252	--	--	--	--	--	--	--	--	--	--						
1600	5050		111	16.7C											3AF	--						
10/01/84	5050		9.4	60.8F	8.1	255	--	--	--	--	--	--	--	--	--	--						
2015	5050		99	16.0C											2AF	--						
10/02/84	5050		9.0	60.1F	8.2	255	--	--	--	--	--	--	--	--	--	--						
0420	5050		94	15.6C											2AF	--						
10/02/84	5050		9.5	57.9F	8.1	258	--	--	--	--	--	--	--	--	--	--						
0755	5050		97	14.4C											3AF	--						
10/02/84	5050		10.5	62.1F	8.1	255	--	--	--	--	--	--	--	--	--	--						
1230	5050		112	16.7C											4AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K		CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	
*****																				*
F3		1430.00	KLAMATH R NR SEIAD VLY								F05C2 CONTINUED									
10/03/84	5050		11.1	62.1F	8.2	256	16	10	22	--	95	--	6.0	--	.1	--		81	1.1	
1300	5050	2100	119	16.7C	8.0	256	.80	.82	.96		1.90		.17		2AF	--		0	1.5	S
							31	32	37											
11/26/84	5050		13.2	41.0F	7.7	192	--	--	--	--	--	--	--	--	--	--				
1435	5050	7220	108	5.0C											9AF	--				
12/17/84	5050		14.0	40.1F	7.5	213	15	9.0	15	--	82	--	5.0	--	.0	--		74	0.8	
1545	5050	5540	113	4.5C	7.5	213	.75	.74	.65		1.64		.14		13A	--		0	1.0	S
							35	35	30											
01/08/85	5050		13.9	39.2F	7.8	205	--	--	--	--	--	--	--	--	--	--				
1405	5050	3850	110	4.0C											4AF	--				
02/25/85	5050		12.2	45.0F	8.2	200	--	--	--	--	--	--	--	--	--	--				
1230	5050		105	7.2C											4AF	--				
02/25/85	5050		12.3	44.4F	8.0	199	--	--	--	--	--	--	--	--	--	--				
1650	5050		105	6.9C											4AF	--				
02/25/85	5050		12.1	44.4F	8.2	208	--	--	--	--	--	--	--	--	--	--				
2025	5050		104	6.9C											5AF	--				
02/26/85	5050		11.5	39.9F	8.0	199	--	--	--	--	--	--	--	--	--	--				
0515	5050		92	4.4C											6AF	--				
02/26/85	5050		12.0	42.1F	7.9	195	--	--	--	--	--	--	--	--	--	--				
0855	5050		99	5.6C											5AF	--				
02/26/85	5050		12.3	41.0F	8.1	196	--	--	--	--	--	--	--	--	--	--				
1255	5050	3730	100	5.0C											5AF	--				
03/06/85	5050		12.3	41.9F	8.5	210	--	--	--	--	--	--	--	--	--	--				
0945	5050		102	5.5C											5AF	--				
03/12/85	5050		12.2	47.3F	8.4	222	--	--	--	--	--	--	--	--	--	--				
1530	5050	3680	109	8.5C											5AF	--				

174

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	CACD3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR		

F3		1430.00			KLAMATH R NR SETAD VLY										F05C2 CONTINUED						
04/16/85	5050		10.0	55.4F	7.7	141	--	--	--	--	--	--	--	--	--						
1340	5050	8980	99	13.0C												8AF	--				
05/13/85	5050		10.9	57.0F	8.4	171	--	--	--	--	--	--	--	--	--	--	--				
1125	5050		110	13.9C												3AF	--				
05/13/85	5050		10.9	59.9F	8.4	169	--	--	--	--	--	--	--	--	--	--	--				
1530	5050		114	15.5C												2AF	--				
05/13/85	5050		10.1	59.0F	8.3	171	--	--	--	--	--	--	--	--	--	--	--				
1905	5050		104	15.0C												2AF	--				
05/14/85	5050		9.5	55.0F	8.2	171	--	--	--	--	--	--	--	--	--	--	--				
0415	5050		93	12.8C												3AF	--				
05/14/85	5050		10.1	55.0F	7.9	171	--	--	--	--	--	--	--	--	--	--	--				
0800	5050		99	12.8C												3AF	--				
05/14/85	5050		11.0	59.0F	8.4	170	--	--	--	--	--	--	--	--	--	--	--				
1140	5050		113	15.0C												3AF	--				
05/14/85	5050		11.0	60.8F	8.4	166	--	--	--	--	--	--	--	--	--	--	--				
1600	5050		116	16.0C												2AF	--				
05/14/85	5050		10.0	59.0F	8.2	170	14	8.0	9.0	1.3	75	6.0	3.0	.0	.1	--	112	68	0.5		
1910	5050		103	15.0C	8.2	170	.70	.66	.39	.03	1.50	.12	.08	.00	--	--	86	0	0.6	T	
							39	37	22	2	88	7	5	0							
05/15/85	5050		9.6	56.0F	8.0	170	--	--	--	--	--	--	--	--	--	--	--				
0415	5050		96	13.3C												2AF	--				
05/15/85	5050		10.7	57.2F	8.2	168	--	--	--	--	--	--	--	--	--	--	--				
1005	5050		108	14.0C												2AF	--				
06/13/85	5050		9.9	71.6F	8.3	169	--	--	--	--	--	--	--	--	--	--	--				
1310	5050	2170	117	22.0C												3AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	B TURB	F SIO2	TDS SUM	TH NCH		

F3		1430.00	KLAMATH R NR SEIAD VLY								F05C2 CONTINUED								
07/09/85 1330	5050 5050		10.1 123	74.3F 23.5C	8.4 181	--	--	--	--	--	--	--	--	--	--	1AF	--		
08/12/85 1610	5050 5050		10.3 126	74.3F 23.5C	8.7 207	--	--	--	--	--	--	--	--	--	--	7AF	--		
08/12/85 2245	5050 5050		7.6 91	72.0F 22.2C	8.4 204	--	--	--	--	--	--	--	--	--	--	6AF	--		
08/13/85 0405	5050 5050		7.5 87	69.8F 21.0C	8.4 207	--	--	--	--	--	--	--	--	--	--	7AF	--		
176	08/13/85 0815	5050 5050	8.7 101	69.8F 21.0C	8.1 208	--	--	--	--	--	--	--	--	--	--	6AF	--		
	08/13/85 1205	5050 5050	9.7 116	72.5F 22.5C	8.4 205	--	--	--	--	--	--	--	--	--	--	7AF	--		
	08/13/85 1600	5050 5050	8.9 111	76.1F 24.5C	8.8 206	--	--	--	--	--	--	--	--	--	--	5AF	--		
	08/13/85 2000	5050 5050	8.0 97	73.9F 23.3C	8.7 201	--	--	--	--	--	--	--	--	--	--	5AF	--		
	08/14/85 0430	5050 5050	7.5 83	64.9F 18.3C	8.0 202	--	--	--	--	--	--	--	--	--	--	--	5AF	--	
08/14/85 0835	5050 5050		8.2 96	70.7F 21.5C	7.9 203 206	14 .70 33	9.0 .74 35	15 .65 31	--	84 1.68	--	9.0 .14	--	.1 3A	--		72 0	0.8 1.0	S
08/14/85 1220	5050 5050		9.5 115	73.9F 23.3C	8.3 205	--	--	--	--	--	--	--	--	--	--	4AF	--		
08/14/85 1645	5050 5050		9.2 115	77.0F 25.0C	8.4 208	--	--	--	--	--	--	--	--	--	--	4AF	--		

176

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						
						CA	MG	NA	K	PERCENT REACTANCE VALUE				B TURB	F SI02	TDS SUM	TH NCH	SAR ASAR	REM	
										CACO3	SO4	CL	NO3							

F3 1430.00		KLAMATH R NR SEIAD VLY										F05C2 CONTINUED								
08/20/85	5050		8.6	68.0F	8.6 198	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0920	5050		98	20.0C										3AF	--					
09/10/85	5050		9.4	65.3F	8.1 219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1330	5050		104	18.5C										3AF	--					
10/23/85	5050		10.6	54.5F	8.1 250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1415	5050		104	12.5C										5AF	--					
11/04/85	5050		10.0	51.8F	8.0 220	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1445	5050		94	11.0C										4AF	--					
12/17/85	5050		12.9	38.3F	7.9 187	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1525	5050		101	3.5C										8AF	--					
01/21/86	5050		12.7	41.0F	7.7 183	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1350	5050		104	5.0C										6AF	--					
01/21/86	5050			41.0F	8.0 181	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1550	5050			5.0C										6AF	--					
01/21/86	5050		12.0	41.0F	8.1 181	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2000	5050		98	5.0C										6AF	--					
01/22/86	5050		11.8	42.1F	7.9 180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0515	5050		98	5.6C										8AF	--					
01/22/86	5050		11.8	42.8F	7.7 180	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0920	5050		99	6.0C										8AF	--					

178

DATE TIME	SAMPLER LAB	G-4 Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				SAR ASAR	REM	
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE				B TURB	F SIO2	TDS SIUM	TH NCH							
											CACO3	SO4	CL	NO3											
* * * * *																									
F3		1435.00			KLAMATH R AT HWY 96 AB SEIAD VLY										F05C3										
10/12/50	5050						16	10	28	4.8		92	40	11	.3	.2	--			81	1.4				
0840	5000				8.9	277	.80	.82	1.22	.12	1.84	.03	.31	.00		29.0		194	0	1.9					
							27	28	41	4	62	28	10	0											
10/02/53	5050		9.6				12	7.4	15	2.5	71	12	6.5	5.4	.76	.1			60	0.8					
1000	5000				7.4	185	.60	.61	.65	.06	1.42	.25	.18	.09	6E	34.0		138	0	1.0					
							31	32	34	3	73	13	9	5											
F3		1460.00			KLAMATH R A SARAH TOTTEN CAMPGROUN										F05C3										
08/25/81	5050		8.5	73.4F	8.0	209	--	--	--	--	--	--	--	--	--	--									
1830	5050		103	23.0C												2AF	--								
08/25/81	5050		7.3	71.1F	8.6	211	--	--	--	--	--	--	--	--	--	--									
2200	5050		87	21.7C												2AF	--								
08/26/81	5050		10.1	69.8F	8.2	205	13	8.0	17	2.8	80	14	5.0	1.6	.2	--		128	66	0.9					
1110	5050		118	21.0C	7.8	206	.65	.66	.74	.07	1.60	.29	.14	.03	1A	--	110	0	1.2						
							31	31	35	3	78	14	7	1											
08/26/81	5050		9.2	73.4F	8.4	210	--	--	--	--	--	--	--	--	--	--									
1710	5050		112	23.0C												2AF	--								
08/27/81	5050		7.2	67.1F	8.1	217	--	--	--	--	--	--	--	--	--	--									
0335	5050		82	19.5C												2AF	--								
08/27/81	5050		9.0	68.0F	8.2	214	--	--	--	--	--	--	--	--	--	--									
1015	5050		103	20.0C												2AF	--								
02/24/82	5050		11.4	42.8F	8.3	175	--	--	--	--	--	--	--	--	--	--									
1100	5050		96	6.0C												62AF	--								
02/24/82	5050		11.9	44.6F	7.8	170	--	--	--	--	--	--	--	--	--	--									
1535	5050		103	7.0C												62AF	--								
02/24/82	5050		12.0	42.8F	8.0	173	--	--	--	--	--	--	--	--	--	--									
2240	5050		101	6.0C												574F	--								

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH				

F3 1460.00						KLAMATH R A SARAH TOTTON CAMPGROUN						F05C3 CONTINUED									
02/25/82	5050		12.0	41.0F	7.8	180	--	--	--	--	--	--	--	--	--						
0730	5050		98	5.0C										43AF	--						
02/25/82	5050		11.1	42.8F	7.6	175	15	8.0	9.0	1.7	75	--	3.0	--	.1	--		70	0.5		
1140	5050		93	6.0C	7.7	178	.75	.66	.39	.04	1.50	--	.08	--	60A	--		0	0.6		
							41	36	21	2									S		
04/28/82	5050		10.6	53.5F	8.0	165	--	--	--	--	74	--	--	--	--	--					
0900	5050		103	11.9C	8.0	170					1.48				8AF	--			S		
07/28/82	5050		9.2	72.5F	8.2	233	--	--	--	--	--	--	--	--	--	--					
1040	5050		111	22.5C										1AF	--						
07/28/82	5050		9.7	77.9F	8.5	231	--	--	--	--	--	--	--	--	--	--					
1640	5050		124	25.5C										1AF	--						
07/28/82	5050		7.0	75.2F	8.3	236	--	--	--	--	--	--	--	--	--	--					
2300	5050		87	24.0C										2AF	--						
07/29/82	5050		7.6	71.6F	7.7	237	--	--	--	--	--	--	--	--	--	--					
0540	5050		91	22.0C										1AF	--						
07/29/82	5050		8.7	72.0F	8.0	234	--	--	--	--	--	--	--	--	--	--					
0830	5050		104	22.2C										1AF	--						
07/29/82	5050		10.4	73.9F	8.2	237	--	--	--	--	--	--	--	--	--	--					
0950	5050		127	23.3C										1AF	--						
09/13/82	5050		9.9	68.0F	8.3	233	--	--	--	--	--	--	--	--	--	--					
1505	5050		114	20.0C										2AF	--						
04/25/83	5050		11.2	49.1F	7.9		16	9.0	11	1.6	12	--	3.0	--	.1	--		77	0.5		
1600	5050		103	9.5C	8.0	196	.80	.74	.48	.04	.24	--	.08	--	6A	--		65	0.3		
							39	36	23	2									S		
04/26/83	5050		11.5	48.2F	8.0	201	--	--	--	--	--	--	--	--	--	--					
1020	5050		104	9.0C										7AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	SAR ASAR		

F3		1460.00	KLAMATH R A SARAH TOTTEN CAMP6ROUN										F05C3 CONTINUED							
04/18/84	5050		11.2	50.9F	7.8	166	13	7.0	10	--	69	--	3.0	--	.0	--		62	0.6	
1145	5050		105	10.5C	8.1	170	.65 39	.58 35	.44 26		1.38		.08		4A	--		0	0.7	\$
05/16/84	5050		10.4	52.0F	7.7	155	--	--	--	--	--	--	--	--	--	--				
0345	5050		99	11.1C		153									5AF	--				
05/16/84	5050		10.5	51.8F	7.5	150	--	--	--	--	--	--	--	--	--	--				
0740	5050		100	11.0C		156									5AF	--				\$
05/16/84	5050		10.9	54.0F	7.6	155	--	--	--	--	--	--	--	--	--	--				
1130	5050		107	12.2C		153									5AF	--				
05/16/84	5050		10.5	56.5F	7.9	155	--	--	--	--	--	--	--	--	--	--				\$
1540	5050		106	13.6C		149									4AF	--				
05/16/84	5050			57.2F	8.1	155	--	--	--	--	--	--	--	--	--	--				
2200	5050			14.0C		154									5AF	--				\$
05/17/84	5050		9.8	55.0F	8.0	158	--	--	--	--	--	--	--	--	--	--				
0400	5050		97	12.8C		149									5AF	--				\$
05/17/84	5050		10.0	54.5F	7.4	155	--	--	--	--	--	--	--	--	--	--				
0750	5050		98	12.5C		151									5AF	--				\$
05/17/84	5050		10.5	57.6F	7.6	155	--	--	--	--	--	--	--	--	--	--				
1140	5050		107	14.2C		154									5AF	--				\$
05/17/84	5050		10.9	59.0F	8.2	158	--	--	--	--	--	--	--	--	--	--				
1545	5050		113	15.0C		149									5AF	--				\$
05/17/84	5050		9.9	59.0F	8.2	155	--	--	--	--	--	--	--	--	--	--				
1950	5050		103	15.0C		151									5AF	--				\$
05/18/84	5050		10.2	57.2F	7.7	158	11	7.0	10	--	66	--	3.0	--	.0	--		56	0.6	
1115	5050		104	14.0C	7.8	154	.55 35	.58 37	.44 28		1.32		.08		4A	--		0	0.7	\$

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR		

F3		1460.00	KLAMATH R A SARAH TOTTEN CAMPGROUN										F05C3 CONTINUED							
08/27/84	5050		10.0	69.8F	8.2	214	--	--	--	--	--	--	--	--	--					
1100	5050		117	21.0C										2AF	--					S
08/27/84	5050		10.1		8.3	212	--	--	--	--	--	--	--	--	--					S
1645	5050													2AF	--					
08/27/84	5050		9.8	73.4F	8.4	223	--	--	--	--	--	--	--	--	--					S
1945	5050		119	23.0C										2AF	--					
08/28/84	5050		7.7	62.1F	7.4	232	--	--	--	--	--	--	--	--	--					S
0415	5050		83	16.7C										3AF	--					
08/28/84	5050		8.8	66.2F	7.6	215	--	--	--	--	--	--	--	--	--					S
0740	5050		99	19.0C										1AF	--					
08/28/84	5050		9.7	71.6F	8.1	215	--	--	--	--	--	--	--	--	--					S
1135	5050		116	22.0C										1AF	--					
08/28/84	5050		10.0	75.2F	8.3	212	--	--	--	--	--	--	--	--	--					S
1540	5050		124	24.0C										2AF	--					
08/28/84	5050		8.2	73.4F	8.4	215	--	--	--	--	--	--	--	--	--					S
1945	5050		100	23.0C										2AF	--					
08/29/84	5050		7.9	68.0F	7.8	217	--	--	--	--	--	--	--	--	--					S
0400	5050		91	20.0C										1AF	--					
08/29/84	5050		8.6	68.0F	7.6	213	--	--	--	--	--	--	--	--	--					S
0740	5050		99	20.0C										1AF	--					
08/30/84	5050		9.3	69.8F	8.2	215	14	9.0	16	--	82	--	6.0	--	.1		72	0.8		
1210	5050		109	21.0C	7.9	220	.70	.74	.70		1.64		.17		24		0	1.1		S
							33	35	33											
10/01/84	5050		10.3	60.1F	8.1	253	--	--	--	--	--	--	--	--	--					
1100	5050		108	15.6C										1AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH		

F3		1460.00	KLAMATH R A SARAH TOTTEN CAMPGROUN										F0503 CONTINUED						
10/01/84 1540	5050 5050		10.4 109	60.1F 15.6C	8.2	252	--	--	--	--	--	--	--	--	--				
10/01/84 1945	5050 5050		9.3 100	62.1F 16.7C	8.3	253	--	--	--	--	--	--	--	--	--	2AF	--		
10/02/84 0350	5050 5050		9.0 93	59.0F 15.0C	8.1	258	--	--	--	--	--	--	--	--	--	2AF	--		
10/02/84 0735	5050 5050		9.0 93	59.0F 15.0C	8.1	255	--	--	--	--	--	--	--	--	--	2AF	--		
10/02/84 1130	5050 5050		10.0 106	60.4F 15.8C	8.1	257	--	--	--	--	--	--	--	--	--	2AF	--		
02/25/85 1200	5050 5050		12.2 107	45.5F 7.5C	8.1	216	--	--	--	--	--	--	--	--	--	5AF	--		
02/25/85 1615	5050 5050		12.9 111	44.1F 6.7C	8.1	207	--	--	--	--	--	--	--	--	--	5AF	--		
02/25/85 2000	5050 5050		11.0 95	44.4F 6.9C	8.0	219	--	--	--	--	--	--	--	--	--	5AF	--		
02/26/85 0450	5050 5050		9.4 76	39.9F 4.4C	8.1	209	--	--	--	--	--	--	--	--	--	5AF	--		
02/26/85 0830	5050 5050		11.9 98	41.0F 5.0C	7.9	203	--	--	--	--	--	--	--	--	--	5AF	--		
02/26/85 1225	5050 5050		12.1 99	41.0F 5.0C	8.2 8.1	205 217	18 .90 39	10 .82 36	13 .57 25	--	89 1.78	--	4.0 .11	--	.1 4A	--		86 0	0.6 0.9
05/13/85 1100	5050 5050		10.5 106	56.5F 13.6C	8.4	170	--	--	--	--	--	--	--	--	--	3AF	--		

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. O DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				TDS SUM	TH NCH	SAR ASAR	REM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	TURB	SIO2						

F3		1460.00	KLAMATH R A SARAH TOTTEN CAMPGROUN										F05C3 CONTINUED									
05/13/85	5050		10.9	60.8F	8.3	166	--	--	--	--	--	--	--	--	--	--	--	--				
1510	5050		116	16.0C											2AF	--						
05/13/85	5050		10.1	59.0F	8.1	176	--	--	--	--	--	--	--	--	--	--	--	--				
1840	5050		105	15.0C											2AF	--						
05/14/85	5050		9.5	55.0F	8.2	166	--	--	--	--	--	--	--	--	--	--	--	--				
0350	5050		94	12.8C											2AF	--						
05/14/85	5050		9.9	54.0F	7.9	169	--	--	--	--	--	--	--	--	--	--	--	--				
0730	5050		97	12.2C											1AF	--						
05/14/85	5050		11.0	58.1F	8.4	168	--	--	--	--	--	--	--	--	--	--	--	--				
1105	5050		113	14.5C											1AF	--						
05/14/85	5050		11.5	60.8F	8.4	171	--	--	--	--	--	--	--	--	--	--	--	--				
1530	5050		122	16.0C											2AF	--						
05/14/85	5050		9.3	59.0F	8.2	172	14	8.0	9.0	--	78	--	3.0	--	1.8	--		68	0.5			
1845	5050		97	15.0C	8.3	175	.70	.66	.39		1.56	--	.08	--	2A	--		0	0.6			
							40	38	22										S			
05/15/85	5050		9.3	54.0F	8.2	168	--	--	--	--	--	--	--	--	--	--	--	--				
0345	5050		91	12.2C											2AF	--						
05/15/85	5050		10.6	55.4F	8.2	169	--	--	--	--	--	--	--	--	--	--	--	--				
0915	5050		105	13.0C											3AF	--						
08/12/85	5050		10.1	76.1F	8.8	203	--	--	--	--	--	--	--	--	--	--	--	--				
1540	5050		126	24.5C											5AF	--						
08/12/85	5050		7.5	72.0F	8.4	210	--	--	--	--	--	--	--	--	--	--	--	--				
2310	5050		90	22.2C											5AF	--						
08/13/85	5050		7.6	68.0F	8.3	207	--	--	--	--	--	--	--	--	--	--	--	--				
0345	5050		87	20.0C											7AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	

F3		1460.00	KLAMATH R A SARAH TOTTEN CAMPGROUN								F05C3 CONTINUED								
08/13/85 0750	5050 5050		9.0 103	68.0F 20.0C	8.1 207	--	--	--	--	--	--	--	--	--	5AF	--	--	--	
08/13/85 1135	5050 5050		9.2 109	71.1F 21.7C	8.4 206	--	--	--	--	--	--	--	--	--	6AF	--	--	--	
08/13/85 1535	5050 5050		9.1 114	76.1F 24.5C	8.8 215	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/13/85 1925	5050 5050		8.0 99	75.0F 23.9C	8.6 199	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/14/85 0400	5050 5050		7.5 87	69.1F 20.6C	7.8 203	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/14/85 0755	5050 5050		8.1 97	71.6F 22.0C	7.9 204	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/14/85 1150	5050 5050		9.2 111	73.0F 22.8C	8.3 209	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/14/85 1615	5050 5050		9.9 125	77.0F 25.0C	8.5 216	--	--	--	--	--	--	--	--	--	4AF	--	--	--	
08/20/85 0850	5050 5050		8.5 98	68.0F 20.0C	8.6 197	--	--	--	--	--	--	--	--	--	3AF	--	--	--	
01/21/86 1130	5050 5050		12.4 99	39.2F 4.0C	7.7 180	--	--	--	--	--	--	--	--	--	7AF	--	--	--	
01/21/86 1530	5050 5050		12.1 99	41.0F 5.0C	8.2 187	--	--	--	--	--	--	--	--	--	7AF	--	--	--	
01/21/86 2025	5050 5050		12.0 98	41.0F 5.0C	8.0 182	--	--	--	--	--	--	--	--	--	7AF	--	--	--	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	PERCENT REACTANCE VALUE				TURB	F SIO2	TDS SUM	TH NCM	SAR ASAR	
										CACO3	SO4	CL	NO3						

F3		2260.00	DILLON C NR SOMESBAR								F05C1 CONTINUED								
05/17/84 1135	5050 5050		11.3 106	52.7F 11.5C	7.3 68	--	--	--	--	--	--	--	--	--	--				
														DAF	--				
05/17/84 1525	5050 5050		11.0 105	54.0F 12.2C	7.5 138	--	--	--	--	--	--	--	--	--	--				X
														6AF	--				S
05/17/84 2300	5050 5050		11.0 101	50.9F 10.5C	7.4 135	--	--	--	--	--	--	--	--	--	--				X
														9AF	--				
05/18/84 0645	5050 5050	250E	11.6 103	48.2F 9.0C	7.3 66	7.0 .35 55	3.0 .25 39	1.0 .04 6	--	28 .56	--	1.0 .03	--	.0 0A	--		30 2	0.1 0.0	S
08/27/84 1205	5050 5050	30E	9.6 108	68.0F 20.0C	7.8 117	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/27/84 1615	5050 5050		10.0 108	64.4F 18.0C	7.9 115	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/27/84 1930	5050 5050		8.9 96	64.4F 18.0C	8.0 122	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/28/84 0340	5050 5050		9.1 96	62.6F 17.0C	7.4 116	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/28/84 0745	5050 5050		9.5 99	61.7F 16.5C	7.5 115	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/28/84 1130	5050 5050		9.7 108	67.1F 19.5C	7.7 117	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/28/84 1540	5050 5050		9.0 103	69.8F 21.0C	8.0 113	--	--	--	--	--	--	--	--	--	--				
														1AF	--				
08/28/84 1945	5050 5050		8.9 98	66.2F 19.0C	7.6 119	--	--	--	--	--	--	--	--	--	--				
														1AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SID2	TDS SUM	TH NCH	SAR ASAR	REM
* * * * *																			
F3		2260.00	DILLON C NR SOMESBAR						F05C1 CONTINUED										
08/29/84 0335	5050 5050	30E	9.2 97	62.6F 17.0C	7.8 116	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
08/29/84 0740	5050 5050		9.4 99	62.1F 16.7C	7.7 116	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/02/84 1140	5050 5050	20E	10.8 108	58.1F 14.5C	7.7 123	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
10/02/84 1555	5050 5050		10.5 105	58.1F 14.5C	7.7 121	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
10/02/84 1940	5050 5050		10.2 99	55.4F 13.0C	7.8 122	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
10/03/84 0425	5050 5050		10.1 96	53.6F 12.0C	7.7 123	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
10/03/84 0830	5050 5050	20E	10.8 114	62.6F 17.0C	7.5 123	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
02/26/85 1215	5050 5050		12.6 102	42.1F 5.6C	7.3 74	--	--	--	--	--	--	--	--	--	--	2AF	--	--	--
02/26/85 1610	5050 5050		12.0 99	43.0F 6.1C	7.2 72	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
02/26/85 2040	5050 5050		12.2 100	43.0F 6.1C	7.2 71	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
02/27/85 0525	5050 5050		12.4 99	40.5F 4.7C	7.6 69	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--
02/27/85 0845	5050 5050	175E	12.7 102	41.5F 5.3C	7.2 73	--	--	--	--	--	--	--	--	--	--	1AF	--	--	--

[illegible]

FO5C1 CONTINUED

188

3

2

3

5

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM		

F3		2260.00	DILLON C NR SOMESBAR						F05C1 CONTINUED												
08/12/85 1540	5050 5050		8.9 102	69.8F 21.0C	7.8 117	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/12/85 1840	5050 5050		8.7 98	68.0F 20.0C	7.8 114	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/13/85 0400	5050 5050		8.9 94	63.0F 17.2C	7.6 116	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/13/85 0740	5050 5050		9.7 103	63.5F 17.5C	7.6 120	--	--	--	--	--	--	--	--	--	--						
														2AF	--				S		
08/13/85 1140	5050 5050		9.4 103	66.2F 19.0C	7.9 119	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/13/85 1510	5050 5050		9.4 109	71.6F 22.0C	8.3 118	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/13/85 1915	5050 5050		9.4 105	68.0F 20.0C	7.6 116	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/14/85 0335	5050 5050		9.0 97	64.4F 18.0C	7.6 117	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
08/14/85 0740	5050 5050		9.5 108	68.9F 20.5C	7.7 114	13 .65 57	5.0 .41 36	2.0 .09 8	--	50 1.00	--	1.0 .03	--	.0 3A	--		53 3	0.1 0.1			
																			S		
08/14/85 1135	5050 5050		9.4 106	68.9F 20.5C	7.9 117	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
01/22/86 1230	5050 5050	200E	12.4 104	44.6F 7.0C	7.3 70	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		
01/22/86 1430	5050 5050		12.3 104	44.6F 7.0C	7.3 67	--	--	--	--	--	--	--	--	--	--						
														1AF	--				S		

MINERAL ANALYSES OF SURFACE WATER

190

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SIO2	F	TDS SUM	TH NCH	SAR ASAR		

F3 2260.00						DILLON C NR SOMESBAR				F05C1 CONTINUED											
01/22/86	5050		12.9	43.0F	7.4	66	--	--	--	--	--	--	--	--	--	--	--	--	--		
2035	5050		106	6.1C											2AF	--				S	
01/23/86	5050		12.5	42.8F	7.2	67	--	--	--	--	--	--	--	--	--	--	--	--	--		
0445	5050		103	6.0C											14F	--				S	
01/23/86	5050		12.7	42.1F	7.3	66	--	--	--	--	--	--	--	--	--	--	--	--	--		
0835	5050		103	5.6C											1AF	--				S	
F3 2264.00						AUBREY C NR SOMES BAR				F05C1											
04/17/84	5050		11.5	49.1F	7.4	78	--	--	--	--	--	--	--	--	--	--	--	--	--		
1420	5050	8E	103	9.5C											1AF	--				S	
08/15/85	5050		9.7	60.8F	7.5	110	13	3.0	4.0	--	45	--	1.0	--	.1	--		45	0.3		
1125	5050	3E	100	16.0C	8.2	112	.65 61	.25 23	.17 16		.90		.03		.04	--		0	0.2	S	
F3 2265.00						ELLIOT C NR SOMESBAR				F05C1											
12/06/71	5050			39.9F		97	--	--	--	--	--	--	--	--	--	--	--	--	--		
1950	5050			4.4C		97									2AF	--					
04/17/84	5050		11.4	48.2F	7.3	71	--	--	--	--	--	--	--	--	--	--	--	--	--		
1430	5050	5E	101	9.0C											1AF	--					
08/12/85	5050		10.1	60.8F	7.3	93	--	--	--	--	--	--	--	--	--	--	--	--	--		
1140	5050		105	16.0C											1AF	--					
08/15/85	5050		9.6	59.0F	7.4	89	10	3.0	3.0	--	38	--	1.0	--	.0	--		38	0.2		
1140	5050	2E	97	15.0C	8.1	91	.50 57	.25 28	.13 15		.76		.03		.04	--		0	0.2	S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER R F TURB SIO2				TDS SUM	TH NCH	SAR ASAR	REM
						CA	MG	NA	K	CAC03	SD4	CL	NO3	TURB	SIO2						

F3 2270.00		SWILLUP C NR SOMESBAR										F05C1									
10/12/50	5050						16	9.7	25	4.8	89	36	10	.5	.2	---			179	0	1.2
1045	5000				7.4	270	.80	.80	1.09	.12	1.78	.75	.28	.01	23.0	---					1.7
							28	28	39	4	63	27	10	0		---					
12/06/71	5050			42.1F		88	--	--	--	--	--	--	--	--	--	---					
1940	5050			5.6C		88									6AF	---					
04/17/84	5050		11.5	49.1F	7.4	82	--	--	--	--	--	--	--	--	--	---					
1445	5050	45E	103	9.5C											1AF	---					
08/29/84	5050		9.8	60.8F	7.5	138	--	--	--	--	--	--	--	--	--	---					
1505	5050		102	16.0C											0AF	---					
05/15/85	5050		11.0	53.6F	7.4	105	--	--	--	--	--	--	--	--	--	---					
1550	5050		105	12.0C											0AF	---					
08/15/85	5050		9.8	60.8F	7.5	132	13	8.0	3.0	--	59	--	1.0	--	.1	---			66	0.2	
1150	5050	4E	102	16.0C	8.2	138	.65	.66	.13	--	1.18	--	.03	--	3A	---			7	0.2	S
							45	46	9												
01/24/86	5050		11.5	44.0F	7.5	94	--	--	--	--	--	--	--	--	--	---					
1030	5050	35E	96	6.7C											1AF	---					
F3 2299.00		INDIAN C NR HAPPY CAMP										F05C2									
09/10/58	5050	1.07	9.0	63.0F			18	8.5	1.6	.7	67	13	2.0	.3	.12	.0			80	0.1	
1315	5050	75E	97	17.2C	7.7	168	.90	.70	.07	.02	1.34	.27	.06	.00	20.0	---			104	13	0.1
							53	41	4	1	80	16	4	0		---					
09/03/59	5050		10.7	66.9F			17	10	2.4	.5	72	15	1.4	.4	.01	.1			84	0.1	
1130	5050	60E	120	19.4C	7.7	182	.85	.82	.10	.01	1.44	.31	.04	.01	19.0	---			109	12	0.2
							48	46	6	1	80	17	2	1		---					
04/16/84	5050		11.8	47.3F	7.3	98	8.0	7.0	2.0	--	21	--	2.0	--	.0	---			49	0.1	
1510	5050	350E	105	8.5C	7.8	100	.40	.58	.09	--	.42	--	.06	--	2A	---			28	0.1	S
							37	54	8												
08/30/84	5050			62.0F		167	--	--	--	--	--	--	--	--	--	---					
0945	5050	150E		16.7C											3AF	---					

161

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	PERCENT REACTANCE VALUE			TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR			
										CACO3	SO4	CL NO3								

F3		2305.00	INDIAN C A SF INDIAN C BR				F05C2 CONTINUED													
08/29/84	5050				163	--	--	--	--	--	--	--	--	--	--	--	--	--		S
1310	5050													9AF	--					
10/02/84	5050		9.5	56.3F	7.5	171	--	--	--	--	--	--	--	--	--	--	--	--		S
1730	5050		95	13.5C										1AF	--					
02/26/85	5050		10.9	42.0F	7.5	123	--	--	--	--	--	--	--	--	--	--	--	--		S
1225	5050	40E	91	5.6C										1AF	--					
F3		2306.00	INDIAN C SF A BR				F05C2													
04/16/84	5050		11.7	45.5F	7.3	79	--	--	--	--	--	--	--	--	--	--	--	--		S
1555	5050	175E	103	7.5C										1AF	--					
08/28/84	5050			69.8F		155	--	--	--	--	--	--	--	--	--	--	--	--		S
1745	5050			21.0C										0AF	--					
10/02/84	5050		9.7	59.0F	7.8	166	--	--	--	--	--	--	--	--	--	--	--	--		S
1700	5050		101	15.0C										1AF	--					
02/26/85	5050		11.0	41.0F	7.4	97	--	--	--	--	--	--	--	--	--	--	--	--		S
1210	5050		91	5.0C										1AF	--					
03/06/85	5050		12.6	38.3F	8.4	93	--	--	--	--	--	--	--	--	--	--	--	--		S
0830	5050		100	3.5C										1AF	--					
F3		2312.00	CRAWFORD C NR CLEAR CREEK				F05C1													
04/17/84	5050		11.6	49.1F	7.5	108	--	--	--	--	--	--	--	--	--	--	--	--		S
1535	5050	5E	104	9.5C										1AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REM	
						CA	MG	NA	K	CACD3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH		SAR ASAR

F3		2315.00	CLEAR C NR HAPPY CAMP						F05C1										
12/06/71	5050			41.0F	78	--	--	--	--	--	--	--	--	--	--	--	--		
1915	5050			5.0C	78									5AF	--			S	
04/17/84	5050		11.7	48.2F	7.4	74	--	--	--	--	--	--	--	--	--	--	--		
1625	5050	150E	104	9.0C										0AF	--				
05/16/84	5050		12.2	44.1F	7.3	75	--	--	--	--	--	--	--	--	--	--	--		
0530	5050		103	6.7C	73									0AF	--				
05/16/84	5050		12.3	45.5F	7.3	74	--	--	--	--	--	--	--	--	--	--	--		
0910	5050		106	7.5C	73									0AF	--			S	
05/16/84	5050		11.6	48.9F	7.4	75	--	--	--	--	--	--	--	--	--	--	--		
1330	5050		104	9.4C	72									0AF	--			S	
05/16/84	5050		11.0	51.1F	7.3	70	--	--	--	--	--	--	--	--	--	--	--		
1730	5050		102	10.6C	76									1AF	--			S	
05/17/84	5050		11.6	50.0F	7.6	69	--	--	--	--	--	--	--	--	--	--	--		
0025	5050		106	10.0C	73									0AF	--				
05/17/84	5050		11.6	48.2F	8.1	70	--	--	--	--	--	--	--	--	--	--	--		
0600	5050		103	9.0C	73									0AF	--				
05/17/84	5050		11.5	48.2F	7.3	75	--	--	--	--	--	--	--	--	--	--	--		
0915	5050		102	9.0C	72									1AF	--				
05/17/84	5050		11.4	52.5F	7.4	70	--	--	--	--	--	--	--	--	--	--	--		
1320	5050		107	11.4C	74									0AF	--			S	
05/17/84	5050			52.7F	7.6	78	--	--	--	--	--	--	--	--	--	--	--		
1725	5050			11.5C	136									6AF	--			X	
05/17/84	5050		10.8	51.8F	7.6	71	--	--	--	--	--	--	--	--	--	--	--		
2125	5050		101	11.0C	135									5AF	--			X	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CACD3	SO4	CL	NO3	B TURB	F SIO2	TDS SUM	TH NCH		

F3		2315.00	CLEAR C NR HAPPY CAMP										F05C1 CONTINUED						
05/18/84	5050		11.6	49.1F	7.6	75	3.0	6.0	1.0	--	33	--	1.0	--	.0	--		32	0.1
0840	5050	250E	105	9.5C	7.5	73	.15	.49	.04	--	.66	--	.03	--	0A	--		0	0.0
							22	72	6										S
08/27/84	5050		9.4	64.9F	8.1	131	--	--	--	--	--	--	--	--	--	--			
1300	5050	25E	103	18.3C											34F	--			S
08/27/84	5050		9.5	66.2F	7.9	131	--	--	--	--	--	--	--	--	--	--			
1815	5050		105	19.0C											2AF	--			S
08/27/84	5050		8.9	64.4F	8.0	131	--	--	--	--	--	--	--	--	--	--			
2230	5050		97	18.0C											0AF	--			S
08/28/84	5050		9.1	59.9F	7.3	131	--	--	--	--	--	--	--	--	--	--			
0610	5050		94	15.5C											0AF	--			S
08/28/84	5050		9.9	63.5F	7.7	131	--	--	--	--	--	--	--	--	--	--			
0930	5050		106	17.5C											0AF	--			S
08/28/84	5050		9.7	68.0F	7.9	134	--	--	--	--	--	--	--	--	--	--			
1335	5050		109	20.0C											1AF	--			S
08/28/84	5050		9.2	68.0F	7.9	130	--	--	--	--	--	--	--	--	--	--			
1730	5050		104	20.0C											0AF	--			S
08/28/84	5050		8.8	64.4F	7.9	130	--	--	--	--	--	--	--	--	--	--			
2155	5050		95	18.0C											0AF	--			S
08/29/84	5050		9.2	61.7F	7.4	132	--	--	--	--	--	--	--	--	--	--			
0535	5050		97	16.5C											0AF	--			S
08/29/84	5050		9.8	63.5F	7.7	133	--	--	--	--	--	--	--	--	--	--			
0915	5050		105	17.5C											0AF	--			S
08/30/84	5050		9.7	62.6F	7.5	122	6.0	12	2.0	--	57	--	1.0	--	.0	--		64	0.1
0815	5050		103	17.0C	8.0	130	.30	.99	.09	--	1.14	--	.03	--	0A	--		8	0.1
							22	72	7										S

[illegible]

F05C1 CONTINUED

[illegible]

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR		
* * * * *																				
F3		2315.00	CLEAR C NR HAPPY CAMP										F05C1 CONTINUED							
05/13/85	5050		11.0	51.0F	7.7	81	--	--	--	--	--	--	--	--	--					
1310	5050		102	10.5C										1AF	--					
05/13/85	5050		10.8	52.7F	7.6	81	--	--	--	--	--	--	--	--	--					
1705	5050		102	11.5C										1AF	--					
05/13/85	5050		10.7	51.0F	7.6	80	--	--	--	--	--	--	--	--	--					
2010	5050		99	10.5C										1AF	--					
05/14/85	5050		10.9	48.0F	7.3	80	--	--	--	--	--	--	--	--	--					
0520	5050		97	8.9C										1AF	--					
05/14/85	5050		11.4	49.0F	7.6	77	--	--	--	--	--	--	--	--	--					
0920	5050		103	9.4C										1AF	--					
05/14/85	5050		11.1	52.7F	7.6	78	--	--	--	--	--	--	--	--	--					
1315	5050		105	11.5C										1AF	--					
05/14/85	5050		10.8	51.8F	7.6	77	--	--	--	--	--	--	--	--	--					
1745	5050		101	11.0C										1AF	--					
05/14/85	5050		10.1	52.0F	7.2	82	4.0	7.0	1.0	--	37	--	1.0	--	.0	--		39	0.1	
2030	5050		95	11.1C	8.1	78	.20	.58	.04	--	.74	--	.03	--	0A	--		2	0.1	
							24	71	5										S	
05/15/85	5050		10.3	47.0F	7.2	78	--	--	--	--	--	--	--	--	--					
0530	5050		90	8.3C										1AF	--				S	
05/15/85	5050		11.2	51.8F	7.7	77	--	--	--	--	--	--	--	--	--					
1140	5050		105	11.0C										1AF	--				S	
08/12/85	5050		9.3	68.9F	8.0	127	--	--	--	--	--	--	--	--	--					
1725	5050		106	20.5C										1AF	--				S	
08/12/85	5050		8.5	66.9F	8.1	129	--	--	--	--	--	--	--	--	--					
2115	5050		95	19.4C										1AF	--				S	

MINERAL ANALYSES OF SURFACE WATER

	DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER						REM
						LABORATORY PH	EC	CA	MG	NA	K	PERCENT REACTANCE VALUE		TURB		F		TDS	TH	SAR		
												CACO3	SO4	CL	NO3	TURB	SI02	SUM	NCH	ASAR		
* * * * *																						
198	F3		2315.00	CLEAR C NR HAPPY CAMP										F05C1 CONTINUED								
	08/13/85	5050		9.1	62.6F	7.5	129	--	--	--	--	--	--	--	--	--	--	--	--			
	0530	5050		97	17.0C												1AF	--			S	
	08/13/85	5050		9.3	64.4F	7.8	129	--	--	--	--	--	--	--	--	--	--	--	--			S
	0925	5050		101	18.0C												1AF	--				
	08/13/85	5050		9.1	69.1F	8.2	128	--	--	--	--	--	--	--	--	--	--	--	--			S
	1337	5050		104	20.6C												1AF	--				
	08/13/85	5050		8.9	70.7F	8.1	127	--	--	--	--	--	--	--	--	--	--	--	--			S
	1720	5050		103	21.5C												1AF	--				
	08/13/85	5050		8.6	68.0F	8.1	128	--	--	--	--	--	--	--	--	--	--	--	--			S
	2120	5050		97	20.0C												1AF	--				
	08/14/85	5050		9.0	64.0F	7.3		--	--	--	--	--	--	--	--	--	--	--	--			S
0545	5050		97	17.8C												1AF	--					
08/14/85	5050		9.6	68.0F	8.1	129	--	--	--	--	--	--	--	--	--	--	--	--			S	
1140	5050		108	20.0C												2AF	--					
08/14/85	5050		9.3	69.4F	8.1	130	--	--	--	--	--	--	--	--	--	--	--	--			S	
1340	5050		107	20.8C												1AF	--					
08/14/85	5050		8.8	69.8F	8.0	129	--	--	--	--	--	--	--	--	--	--	--	--			S	
1830	5050		101	21.0C												1AF	--					
01/21/86	5050		12.3	42.4F	7.7	83	--	--	--	--	--	--	--	--	--	--	--	--			S	
1515	5050		101	5.8C												1AF	--					
01/21/86	5050		12.5	42.1F	7.7	78	--	--	--	--	--	--	--	--	--	--	--	--			S	
1725	5050		102	5.6C												1AF	--					
01/21/86	5050		11.9	43.7F	7.6	77	--	--	--	--	--	--	--	--	--	--	--	--			S	
2150	5050		100	6.5C												1AF	--					

MINERAL ANALYSES OF SURFACE WATER

199

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR		

F3		2328.00	LITTLE GRIDER C A HAPPY CAMP								F05C2										
08/30/84	5050			59.0F		129	--	--	--	--	--	--	--	--	--	--	--	--	--		
0820	5050	6E		15.0C												0AF	--				
02/26/85	5050		10.7	44.0F	7.4	96	--	--	--	--	--	--	--	--	--	--	--	--	--		
1425	5050	12E	91	6.7C												1AF	--				
08/15/85	5050		9.3	63.5F	7.8	128	10	8.0	4.0	--	57	--	4.0	--	.0	--		58	0.2		
1310	5050	3E	100	17.5C	8.2	133	.50	.66	.17		1.14		.11		0A	--	1	0.2		S	
							38	50	13												
01/24/86	5050		12.5	43.5F	7.4	90	--	--	--	--	--	--	--	--	--	--	--	--	--		
0930	5050	30E	105	6.4C											2AF	--					
F3		2329.00	INDIAN C AT MOUTH								F05C2										
08/04/84	5050			69.1F		16	11	2.5	.6	54	35	1.2	.4	.13	.2		85	0.1			
2030	5000	35E		20.6C	8.1	186	.80	.90	.11	.02	1.08	.73	.03	.01	15.0	114	31	0.1			
							44	49	6	1	58	39	2	1							
05/16/84	5050		12.1	44.1F	7.3	100	--	--	--	--	--	--	--	--	--	--	--	--	--		
0450	5050		103	6.7C		97									1AF	--				S	
05/16/84	5050		12.3	43.7F	7.6	100	--	--	--	--	--	--	--	--	--	--	--	--	--		
0840	5050	150E	104	6.5C		98									0AF	--				S	
05/16/84	5050		11.3	51.1F	7.4	100	--	--	--	--	--	--	--	--	--	--	--	--	--		
1250	5050		105	10.6C		100									2AF	--				S	
05/16/84	5050		10.7	54.0F	7.6	98	--	--	--	--	--	--	--	--	--	--	--	--	--		
1655	5050		103	12.2C		101									1AF	--					
05/16/84	5050		11.0	50.9F	7.6	98	--	--	--	--	--	--	--	--	--	--	--	--	--		
2340	5050		102	10.5C		98									1AF	--					
05/17/84	5050		11.4	48.2F	7.3	91	--	--	--	--	--	--	--	--	--	--	--	--	--		
0530	5050		102	9.0C		98									1AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REM		
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SI02	TDS SUM	TH NCH		SAR ASAR	

F3		2329.00	INDIAN C AT MOUTH				F05C2 CONTINUED													
05/17/84	5050		11.6	48.2F	7.4	100	--	--	--	--	--	--	--	--	--					
0845	5050		104	9.0C		99									1AF	--				
05/17/84	5050		11.0	54.5F	7.6	98	--	--	--	--	--	--	--	--	--	--				
1245	5050		107	12.5C		97									1AF	--				
05/17/84	5050			54.5F	7.5		--	--	--	--	--	--	--	--	--	--				
1320	5050			12.5C		142									6AF	--				
05/17/84	5050		10.7	56.3F	7.6	105	--	--	--	--	--	--	--	--	--	--				
1650	5050		106	13.5C		144									5AF	--				
05/17/84	5050		10.8	53.6F	7.6	100	--	--	--	--	--	--	--	--	--	--				
2055	5050		104	12.0C		144									5AF	--				
05/18/84	5050	150E	11.5	47.3F	7.9	102	8.0	6.0	2.0	--	43	--	2.0	--	.0	--		44	0.1	
0750	5050		102	8.5C	7.6	100	.40	.49	.09		.86	--	.06	--	0A	--		2	0.1	
							41	50	9											
08/27/84	5050		9.3	68.0F	8.0	169	--	--	--	--	--	--	--	--	--	--				
1220	5050	25F	106	20.0C											2AF	--				
08/27/84	5050		10.5	66.2F	8.0	167	--	--	--	--	--	--	--	--	--	--				
1740	5050		117	19.0C											2AF	--				
08/27/84	5050		9.3	66.2F	8.0	169	--	--	--	--	--	--	--	--	--	--				
2115	5050		104	19.0C											2AF	--				
08/28/84	5050		8.8	61.7F	7.4	171	--	--	--	--	--	--	--	--	--	--				
0520	5050		93	16.5C											2AF	--				
08/28/84	5050		9.6	63.5F	7.8	169	--	--	--	--	--	--	--	--	--	--				
0900	5050		104	17.5C											2AF	--				
08/28/84	5050		9.5	68.0F	8.0	171	--	--	--	--	--	--	--	--	--	--				
1255	5050		108	20.0C											2AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM			
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR					

F3		2329.00	INDIAN C AT MOUTH				F05C2 CONTINUED																
08/28/84 1655	5050 5050		9.3 106	68.0F 20.0C	8.1 169	--	--	--	--	--	--	--	--	--	--								
														2AF	--					S			
08/28/84 2125	5050 5050		8.6 98	68.0F 20.0C	8.0 170	--	--	--	--	--	--	--	--	--	--								
														2AF	--					S			
08/29/84 0510	5050 5050		8.2 89	63.9F 17.7C	8.0 171	--	--	--	--	--	--	--	--	--	--								
														2AF	--					S			
08/29/84 0850	5050 5050		9.7 105	63.5F 17.5C	7.7 170	--	--	--	--	--	--	--	--	--	--								
														2AF	--					S			
08/29/84 1345	5050 5050				165	--	--	--	--	--	--	--	--	--	--								
														2AF	--					S			
08/30/84 0725	5050 5050		9.4 102	63.5F 17.5C	7.6 167	15 .75 43	10 .82 47	4.0 .17 10	--	69 1.38	--	3.0 .08	--	.0 1A	--		78 10	0.2 0.3					
																				S			
10/01/84 1235	5050 5050	25E	10.7 108	57.9F 14.4C	7.9 170	--	--	--	--	--	--	--	--	--	--								
														2AF	--								
10/01/84 1640	5050 5050		10.0 101	57.9F 14.4C	8.0 170	--	--	--	--	--	--	--	--	--	--								
														2AF	--								
10/01/84 2100	5050 5050		9.8 98	57.2F 14.0C	8.1 170	--	--	--	--	--	--	--	--	--	--								
														2AF	--								
10/02/84 0500	5050 5050		8.9 87	55.4F 13.0C	7.8 170	--	--	--	--	--	--	--	--	--	--								
														4AF	--								
10/02/84 0845	5050 5050		9.4 91	54.0F 12.2C	7.7 170	--	--	--	--	--	--	--	--	--	--								
														4AF	--								
10/02/84 1320	5050 5050		10.3 102	55.9F 13.3C	7.9 170	--	--	--	--	--	--	--	--	--	--								
														4AF	--								

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR		

F3		2329.00	INDIAN C AT MOUTH				F05C2 CONTINUED													
10/03/84 1225	5050 5050		10.7 110	59.0F 15.0C	8.0 170	--	--	--	--	--	--	--	--	--	--	2AF	--			
02/25/85 1345	5050 5050		12.1 106	46.4F 8.0C	8.1 111	--	--	--	--	--	--	--	--	--	--	1AF	--			
02/25/85 1750	5050 5050		11.6 96	42.1F 5.6C	7.5 110	--	--	--	--	--	--	--	--	--	--	1AF	--			
02/25/85 2125	5050 5050		12.0 99	42.1F 5.6C	7.6 114	--	--	--	--	--	--	--	--	--	--	1AF	--			
02/26/85 0605	5050 5050		12.4 97	38.5F 3.6C	7.8 110	--	--	--	--	--	--	--	--	--	--	2AF	--			
02/26/85 0935	5050 5050		13.0 104	39.9F 4.4C	7.7 110	--	--	--	--	--	--	--	--	--	--	3AF	--			
02/26/85 1335	5050 5050		13.0 105	40.5F 4.7C	8.1 112 8.0 113	9.0 .45 38	8.0 .66 55	2.0 .09 8	--	52 1.04	--	1.0 .03	--	.0 1A	--			56 4	0.1 0.1	
03/05/85 1530	5050 5050		12.3 101	41.9F 5.5C	6.8 117	--	--	--	--	--	--	--	--	--	--	1AF	--			
05/13/85 1250	5050 5050		11.0 105	53.0F 11.7C	7.9 104	--	--	--	--	--	--	--	--	--	--	1AF	--			
05/13/85 1625	5050 5050		10.4 102	55.4F 13.0C	7.8 106	--	--	--	--	--	--	--	--	--	--	1AF	--			
05/13/85 1940	5050 5050		10.1 98	54.0F 12.2C	7.8 107	--	--	--	--	--	--	--	--	--	--	1AF	--			
05/14/85 0500	5050 5050		11.2 99	47.0F 8.3C	7.5 104	--	--	--	--	--	--	--	--	--	--	1AF	--			

203

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM	
					LABORATORY	PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B	F	TDS	TH		SAR
																			SUM	NCH		ASAR

F3 2329.00			INDIAN C AT MOUTH										F05C2 CONTINUED									
05/14/85	5050		11.6	47.0F	7.5	103	--	--	--	--	--	--	--	--	--	--	--	--	--			
0855	5050		102	8.3C											1AF	--						
05/14/85	5050		11.1	52.7F	7.8	103	--	--	--	--	--	--	--	--	--	--	--	--	--			
1235	5050		105	11.5C											1AF	--						
05/14/85	5050		10.7	55.4F	7.8	104	--	--	--	--	--	--	--	--	--	--	--	--	--			
1700	5050		105	13.0C											1AF	--						
05/14/85	5050		10.0	54.0F	7.8	102	9.0	6.0	2.0	--	49	--	1.0	--	.2	--		47	0.1			
2000	5050		97	12.2C	8.2	106	.45	.49	.09		.98	--	.03	--	0A	--		0	0.1			
							44	48	9											S		
05/15/85	5050		10.4	47.0F	7.3	104	--	--	--	--	--	--	--	--	--	--	--	--	--			
0505	5050		92	8.3C											2AF	--						
05/15/85	5050		11.4	50.0F	7.5	102	--	--	--	--	--	--	--	--	--	--	--	--	--			
1105	5050		105	10.0C											1AF	--						
08/12/85	5050		9.2	68.9F	8.3	163	--	--	--	--	--	--	--	--	--	--	--	--	--			
1650	5050		105	20.5C											2AF	--						
08/12/85	5050		8.2	66.9F	8.2	163	--	--	--	--	--	--	--	--	--	--	--	--	--			
2200	5050		92	19.4C											2AF	--						
08/13/85	5050		8.6	64.4F	7.8	165	--	--	--	--	--	--	--	--	--	--	--	--	--			
0500	5050		94	18.0C											3AF	--						
08/13/85	5050		9.5	66.2F	7.9	168	--	--	--	--	--	--	--	--	--	--	--	--	--			
0855	5050		106	19.0C											2AF	--						
08/13/85	5050		9.3	70.0F	8.3	163	--	--	--	--	--	--	--	--	--	--	--	--	--			
1310	5050		108	21.1C											2AF	--						
08/13/85	5050		9.0	69.8F	8.4	163	--	--	--	--	--	--	--	--	--	--	--	--	--			
1650	5050		104	21.0C											2AF	--						

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SID2	TDS SUM	TH NCH	SAR ASAR	REM

F3 2329.00		INDIAN C AT MOUTH						F05C2 CONTINUED											
08/13/85 2050	5050 5050		8.2 93	68.0F 20.0C	8.4 163	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
08/14/85 0510	5050 5050		8.5 94	66.0F 18.9C	7.3 164	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
08/14/85 1305	5050 5050		9.2 108	71.1F 21.7C	8.3 165	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														3AF	--				
08/14/85 1750	5050 5050		8.8 102	69.8F 21.0C	8.0 167	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														3AF	--				
01/21/86 1450	5050 5050		12.0 99	42.1F 5.6C	7.4 107	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
01/21/86 1700	5050 5050		11.8 97	42.1F 5.6C	7.3 105	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
01/21/86 2115	5050 5050		12.2 101	42.8F 6.0C	7.8 108	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														2AF	--				
01/22/86 0600	5050 5050		11.9 98	42.1F 5.6C	7.6 109	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														3AF	--				
01/22/86 1010	5050 5050		11.9 96	41.0F 5.0C	7.3 108	--	--	--	--	--	--	--	--	--	--	--	--	--	--
														1AF	--				
F3 2330.00		INDIAN C AT HAPPY CAMP						F05C2											
10/12/50 0945	5050 5000					16 .80 27	9.2 .76 26	27 1.17 40	7.2 .18 6	93 1.86 63	38 .79 27	11 .31 10	.6 .01 0	.2 28.0	-- 193		78 0	1.3 1.8	
05/13/59 1145	5050 5050		9.7 106	64.9F 18.3C	7.4 214	19 .95 44	7.7 .63 29	12 .52 24	1.8 .05 2	80 1.60 75	18 .37 17	4.6 .13 6	1.2 .02 1	.09 16.0	.1 128		79 0	0.6 0.8	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM
* * * * *																				
F3 2330.00		INDIAN C AT HAPPY CAMP										F05C2 CONTINUED								
12/06/71	5050			41.0F	90	--	--	--	--	--	--	--	--	--	--					
1850	5050			5.0C	90										13AF	--			S	
F3 2355.00		PORTUGUESE C NR SEIAD VALLEY										F05C2								
09/13/71	5050		9.6	63.0F	7.3	125	--	--	--	--	--	--	--	--	--	--				
1800	5050	5E	104	17.2C												--				
06/15/72	5050			61.7F	7.4	100	--	--	--	--	--	--	--	--	--	--				
1340	5050	8E		16.5C		96									0AF	--				
04/18/84	5050		11.7	44.6F	7.4	80	--	--	--	--	--	--	--	--	--	--				
1025	5050	24E	100	7.0C											1AF	--			S	
08/30/84	5050			61.7F		134	--	--	--	--	--	--	--	--	--	--				
1050	5050	6E		16.5C											0AF	--			S	
02/26/85	5050		11.1	41.0F	7.3	80	--	--	--	--	--	--	--	--	--	--				
1015	5050	15E	91	5.0C											5AF	--			S	
08/15/85	5050		9.2	64.4F	7.7	125	9.0	10	2.0	--	64	--	1.0	--	.0	--		64	0.1	
1435	5050	3E	101	18.0C	8.3	131	.45 33	.82 60	.09 7		1.28	--	.03		0A	--		0	0.1	
01/23/86	5050		12.0	43.0F	7.4	76	--	--	--	--	--	--	--	--	--	--				
1415	5050	30E	101	6.1C											1AF	--				
F3 2360.00		BITTENBENDER C NR SEIAD VALLEY										F05C2								
09/13/71	5050		8.7	59.0F	7.2	145	--	--	--	--	--	--	--	--	--	--				
1700	5050	.5	90	15.0C												--				

[illegible]

F05C3

207

F0581

[illegible]

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.W. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						REM	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCW	SAR ASAR			
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *				
F3 4100.00		SALMON R A SOMESBAR										F0581 CONTINUED									
11/12/58	5050	3.37	11.5	50.0F	8.6		16	3.6	3.3	.7	57	3.8	4.0	.1	.0	.0		55	0.2		
1200	5000	310	103	10.0C		123	.80	.30	.14	.02	1.14	.08	.11	.00		16.0	82	0	0.2		
							63	24	11	2	86	6	8	0							
12/02/58	5050	3.52	12.4	44.1F	7.4		14	4.4	2.5	.4	48	7.7	3.2	.0	.0	.0		53	0.1		
1040	5000	400	103	6.7C		107	.70	.36	.11	.01	.96	.16	.09	.00		15.0	76	5	0.1		
							59	31	9	1	79	13	7	0							
01/20/59	5050	4.54	12.9	39.0F	7.3		12	2.9	1.9	.1	37	3.8	2.5	.1	.0	.0		42	0.1		
1020	5000	1540	99	3.9C	7.8	90	.60	.24	.08	.00	.74	.08	.07	.00		13.0	58	5	0.1		
							65	26	9		83	9	8	0							
02/03/59	5050	4.82	13.1	41.0F	7.5		14	2.8	1.7	.3	44	2.9	2.7	.0	.0	.0		47	0.1		
1055	5000	2080	104	5.0C	7.9	99	.70	.23	.07	.01	.88	.06	.08	.00		15.0	66	3	0.1		
							69	23	7	1	86	6	8	0							
03/05/59	5050		12.5	44.1F	7.4		13	3.5	2.1	.3	43	6.7	2.0	.5	.0	.0		47	0.1		
1015	5000	2680	104	6.7C	7.3	98	.65	.29	.09	.01	.86	.14	.06	.01	4E	15.0	69	4	0.1		
							63	28	9	1	80	13	6	1							
04/08/59	5050	4.95	11.4	50.0F	7.4		12	6.2	2.1	.1	54	2.9	2.7	.0	.0	.0		55	0.1		
1130	5000	2340	102	10.0C	8.0	114	.60	.51	.09	.00	1.08	.06	.08	.00		16.0	74	2	0.1		
							50	43	8		89	5	7	0							
05/06/59	5050	4.80	11.2	51.1F	7.4		11	4.0	1.6	.1	33	9.6	1.8	.4	.0	.0		44	0.1		
0945	5000	2040	102	10.6C	7.7	77	.55	.33	.07	.00	.66	.20	.05	.01	10E	12.0	60	11	0.1	C	
							58	35	7		72	22	5	1							
06/03/59	5050	4.72	10.6	55.9F	7.5		10	.6	1.7	.3	27	1.0	2.1	.2	.0	.0		28	0.1		
0750	5000	1860	102	13.3C	7.7	60	.50	.05	.07	.01	.54	.02	.06	.00	1E	9.5	42	1	0.1		
							79	8	11	2	87	3	10	0							
07/15/59	5050	3.51	8.3	75.0F	7.9		12	5.4	3.2	.8	48	7.0	3.2	1.6	.0	.0		52	0.2		
1615	5000	349	99	23.9C	8.1	105	.60	.44	.14	.02	.96	.15	.09	.03		15.0	77	4	0.2		
							50	37	12	2	78	12	7	2							
08/06/59	5050	3.40	8.4	73.0F	7.8		16	6.8	10	1.8	75	4.0	6.5	.3	.1	.3		68	0.5		
1045	5000	276	98	22.8C	8.0	176	.80	.56	.44	.05	1.50	.08	.18	.00		18.0	108	0	0.7		
							43	30	24	3	85	5	10	0							
09/10/59	5050	3.16	8.7	70.0F	7.5		19	4.0	3.9	1.2	59	11	3.0	.4	.1	.1		64	0.2		
0945	5000	137	99	21.1C	7.7	142	.95	.33	.17	.03	1.18	.23	.08	.01	10E	16.0	94	5	0.2		
							64	22	11	2	79	15	5	1							
10/08/59	5050	3.31	10.1	57.0F	7.9		18	5.6	5.3	.8	61	13	3.5	.2	.0	.1		68	0.3		
1630	5000	220	99	13.9C	8.0	130	.90	.46	.23	.02	1.22	.27	.10	.00		17.0	100	7	0.3	C	
							56	29	14	1	77	17	6	0							

MINERAL ANALYSES OF SURFACE WATER

209

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR		REM	
						CA	MG	NA	K	CAC03	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	ASAR				

F3		4100.00	SALMON R A SOMESBAR										F0581 CONTINUED									
12/08/60 1150	5050 5000	4.01 800E	12.9 99	39.0F 3.9C	7.3 7.6	107	--	--	2.3 .10 9	--	47 .94	--	1.0 .03	--	.0 10E	--			50		S	
01/12/61 1135	5050 5000	3.85 645	14.3 117	43.0F 6.1C	7.5 7.5	104	--	--	2.0 .09 9	--	48 .96	4.0 .08	1.2 .03	--	.0 4E	--			47		S	
03/09/61 1030	5050 5000	4.96 2170	11.9 99	44.1F 6.7C	7.5 8.0	107	--	--	2.4 .10 9	--	51 1.02	--	.1 .00	--	.0 3E	--			50		S	
04/06/61 1130	5050 5000	5.93 4170	11.7 101	46.9F 8.3C	7.4 7.8	78	--	--	.7 .03 4	--	34 .68	--	1.5 .04	--	.0 2E	--			37		S	
05/08/61 1615	5050 5000	4.97 2170	10.8 99	52.0F 11.1C	7.3 7.8	77	.11 .55 70	1.9 .16 20	1.5 .07 9	.5 .01 1	36 .72 94	1.8 .04 5	.2 .01 1	.0 .00 0	.1 1E	.1 13.0		36 0	0.1 0.1			
06/07/61 1730	5050 5000	5.32 2840	10.6 100	54.0F 12.2C	7.3 7.6	51	--	--	.8 .03 6	--	23 .46	--	1.0 .03	--	.0 2E	--			24		S	
07/06/61 1210	5050 5000	3.84 645	9.7 102	63.0F 17.2C	7.7 7.8	87	--	--	2.4 .10 11	--	38 .76	--	2.0 .06	--	.0 1E	--			40		S	
08/03/61 1545	5050 5000				8.2	115	--	--	3.6 .16 14	--	54 1.08	--	.4 .01	--	.0 --	--			51		S	
09/06/61 1430	5050 5000	3.15 166	9.6 109	70.0F 21.1C	8.1 8.6	130	.18 .90 66	3.6 .30 22	3.3 .14 10	1.0 .03 2	60 1.20 84	4.4 .09 6	4.8 .14 10	.0 .00 0	.0 2E	.0 16.0		60 0	0.2 0.2			
10/04/61 1425	5050 5000	3.11 48	10.1 105	62.1F 16.7C	8.1 8.3	135	--	--	2.7 .12 9	--	63 1.26	--	2.7 .08	--	.0 3E	--			62		S	
11/08/61 1400	5050 5000	3.28 252	11.4 101	48.9F 9.4C	7.8 8.1	122	--	--	2.4 .10 8	--	55 1.10	--	1.8 .05	--	.0 2E	--			56		S	
12/06/61 1435	5050 5000	3.86 680	12.0 99	44.1F 6.7C	7.4 8.1	111	--	--	2.0 .09 8	--	52 1.04	--	1.0 .03	--	.0 3E	--			52		S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					SAR	REM		
						CA	MG	NA	K		CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCH	ASAR				

		F3	4100.00	SALMON R A SOMESBAR					F05B1 CONTINUED														
01/10/62	5050	4.18	12.5	39.9F	7.3			1.5		39		1.8		.0				41					
1355	5000	1010	98	4.4C	7.8	87		.07		.78		.05		1E							S		
								8															
02/08/62	5050	5.49	11.8	44.1F	7.3			1.9		41		1.1		.0				42					
1115	5000	3200	98	6.7C	7.8	88		.08		.82		.03		4E							S		
								9															
03/08/62	5050	4.72	11.9	45.0F	7.5			2.9		56		1.0		.0				59					
1250	5060	1790	100	7.2C	8.0	122		.13		1.12		.03		5E							S		
								10															
04/05/62	5050	5.69	11.6	48.0F	7.3			1.5		36		1.0		.0				36					
1003	5000	3700	101	8.9C	7.7	80		.07		.72		.03		1E							S		
								9															
05/08/62	5050	5.46	11.1	51.1F	7.2		7.9	1.3	1.2	.7	25	.8	.5	.0	.0	.1		25	0.1				
1215	5000	3240	101	10.6C	7.8	56	.39	.11	.05	.02	.50	.02	.01	.00	3E	9.4	37	0	0.0				
							68	19	9	4	94	4	2	0									
06/04/62	5050	4.67	10.5	53.1F	7.2			1.4		27		.5		.0				28					
1530	5000	1770	98	11.7C	7.7	60		.06		.54		.01		2E							S		
								10															
07/09/62	5050	3.70	8.5	69.1F	7.9			2.1		39		1.2		.0				39					
1525	5000	379	95	20.6C	8.0	87		.09		.78		.03		1E							S		
								10															
08/06/62	5050	3.31	8.7	68.0F	8.2			3.4		56		3.8		.0				52					
1445	5000	267	97	20.0C	8.2	117		.15		1.12		.11		1E							S		
								13															
09/04/62	5050	3.18	9.4	73.0F	8.2		18	3.3	3.5	.6	56	3.8	2.5	1.8	.1	.1	81	58	0.2				
1530	5000	180	110	22.8C	7.1	130	.90	.27	.15	.02	1.12	.08	.07	.03	1E	15.0	82	3	0.2				
							67	20	11	1	86	6	5	2									
10/08/62	5050	3.89	11.5	55.9F	7.8			2.4		47		2.2		.0				46					
1430	5000	681	111	13.3C	7.7	100		.10		.94		.06		3E							S		
								10															
11/05/62	5050	3.75	10.5	54.0F	7.5			2.5		54		2.2		.0				49					
1420	5000	544	99	12.2C	8.0	111		.11		1.08		.06		1E							S		
								10															
12/03/62	5050	9.70	12.6	48.9F	7.3			2.0		34		1.0		.1				34					
1330	5000	14400	111	9.4C	7.6	76		.09		.68		.03		70E							S		
								12															

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR ASAR	REM
					LABORATORY PH	EC	CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH		

F3		4100.00	SALMON R A SOMESBAR				F05B1 CONTINUED													
01/07/63	5050	4.11	13.2	41.0F	7.3		--	--	2.1	--	51	--	1.2	--	.0	--			51	
1225	5000	992	105	5.0C	7.9	108			.09		1.02		.03		1E					S
									8											
02/05/63	5050	7.70	12.3	46.9F	7.2		--	--	1.5	--	33	--	1.8	--	.0	--			34	
1316	5000	8820	106	8.3C	7.5	75			.07		.66		.05		45E					S
									9											
03/02/63	5050	4.21	12.6	45.0F	7.6		--	--	2.1	--	53	--	1.0	--	.0	--			53	
1305	5000	1230	106	7.2C	7.9	112			.09		1.06		.03		2E					S
									8											
04/01/63	5050	4.69	12.5	46.0F	7.3		--	--	2.0	--	51	--	1.2	--	.0	--			49	
1310	5000	3720	106	7.8C	8.0	106			.09		1.02		.03		3E					S
									8											
05/06/63	5050	6.64	11.8	48.9F	7.4		9.7	1.9	1.6	1.4	32	3.0	1.1	1.4	.0	.0	50	32	0.1	F
1225	5000	5910	104	9.4C	7.6	69	.48	.16	.07	.04	.64	.06	.03	.02	10E	11.0	50	0	0.1	
							64	21	9	5	85	8	4	3						
06/10/63	5050	4.71	10.2	60.1F	7.4		--	--	1.8	--	38	--	1.2	--	.0	--			36	
1240	5000	1840	104	15.6C	8.0	80			.08		.76		.03		1E					S
									10											
07/16/63	5050	3.65	9.8	62.1F	8.1		--	--	2.7	--	53	--	2.8	--	.0	--			50	
1140	5000	565	102	16.7C	8.2	106			.12		1.06		.08		1E					S
									11											
08/12/63	5050	3.32	9.5	72.0F	7.9		--	--	3.2	--	61	--	3.0	--	.0	--			60	
1230	5000	314	110	22.2C	8.1	130			.14		1.22		.08		1E					S
									10											
09/03/63	5050	3.20	9.7	69.1F	8.2		19	3.8	3.2	1.1	64	3.0	4.0	.1	.0	.0	85	63	0.2	
1210	5000	240	109	20.6C	8.1	137	.95	.31	.14	.03	1.28	.06	.11	.00	1E	17.0	90	0	0.2	
							66	22	10	2	88	4	8	0						
10/01/63	5050	3.10	10.4	64.9F	8.2		--	--	3.4	--	65	--	2.0	--	.0	--			65	
1245	5000	185	112	18.3C	7.8	142			.15		1.30		.06		1E					S
									10											
11/12/63	5050	4.51	11.2	48.9F	7.4		--	--	1.6	--	35	--	.9	--	.1	--			38	
1320	5000	1650	99	9.4C	7.5	82			.07		.70		.03		3E					S
									8											
12/09/63	5050	4.22	12.2	44.1F	7.3		--	--	1.8	--	41	--	.5	--	.1	--			42	
1550	5000	1230	101	6.7C	7.8	93			.08		.82		.01		1E					S
									9											

MINERAL ANALYSES OF SURFACE WATER

213

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN	CA	MG	NA	K	MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE	SO4	CL	NO3	B TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR	REM
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
	F3	4100.00			SALMON R A SOMESBAR															
05/06/68	5050	4.22	11.6	48.0F	7.4		10	1.7	1.6	.5	33	1.5	1.2	.1	.0	--	53	32	0.1	E
1145	5050	1600	101	8.9C	8.1	74	.50	.14	.07	.01	.66	.03	.03	.00	1E	--	36	0	0.1	T
							69	19	10	1	92	4	4	0						
09/09/68	5050	2.73	10.0	68 F	8.2		21	4.5	3.7	1.6	67	6.7	2.4	.0	.0	--	77	71	0.2	
1130	5050	174	111	20 C	7.7	161	1.05	.37	.16	.04	1.34	.14	.07	.00	2E	--	80	4	0.2	
							65	23	10	2	86	9	5	0						
05/12/69	5050	8.97	12.7	51 F	7.3		8.0	1.7	1.0	.8	25	1.3	.9	.2	.0	--	32	27	0.1	
1325	5050	8930	115	11 C	7.4	56	.40	.14	.04	.02	.50	.03	.03	.00	120E	--	29	2	0.0	
							67	23	7	3	89	5	5	0						
09/08/69	5050	2.05	9.8	70 F	8.1		20	4.4	2.9	.5	65	4.9	2.4	.0	.0	--	78	68	0.2	
1315	5050	195	111	21 C	7.9	145	1.00	.36	.13	.01	1.30	.10	.07	.00	4E	--	74	3	0.2	
							67	24	9	1	88	7	5	0						
01/05/70	5050	3.77	14.8	37 F	7.1		--	--	1.9	--	50	--	1.0	--	.1	--		53		
1410	5050	1090	111	3 C	7.2	114			.08		1.00		.03		2E	--				
									7											S
05/11/70	5050	6.69	13.1	45 F	7.3		10	1.9	1.7	.9	32	3.1	1.0	.1	.0	--	52	33	0.1	F
1330	5050	1750	110	7 C	7.5	74	.50	.16	.07	.02	.64	.06	.03	.00	5E	--	38	1	0.1	T
							67	21	9	3	88	8	4	0						
10/19/70	5050	4.04	11.3	53.6F	8.0		22	4.9	3.8	1.7	67	8.2	2.8	.0	.0	--	104	75	0.2	
1200	5050	123	106	12.0C	8.0	163	1.10	.40	.17	.04	1.34	.17	.08	.00	3E	--	84	8	0.2	
							64	23	10	2	84	11	5	0						
06/21/71	5050	6.77	11.4	55 F	7.2		7.2	1.2	1.8	.6	23	2.1	.3	.0	.1	--	48	23	0.2	E
1150	5050	3360	110	13 C	7.7	54	.36	.10	.08	.02	.46	.04	.01	.00	4E	--	27	0	0.1	T
							64	18	14	4	90	8	2	0						
10/19/71	5050	3.40	11.4	52.9F	7.4	136	--	--	3.2	--	61	--	2.8	--	.0	--		63		
1145	5050	270	106	11.6C	7.9	139			.14		1.22		.08		3E	--				
									10											S
11/10/71	5050	4.74	11.0	46.0F	7.4	118	--	--	--	--	--	--	--	--	--	--				
0030	5050		94	7.8C		112									46AF	--				
11/10/71	5050	5.98	11.9	46.4F	7.2	102	--	--	--	--	--	--	--	--	--	--				
0740	5050		102	8.0C		95									85AF	--				S
11/10/71	5050	6.14	11.9	46.0F	7.2		--	--	--	--	--	--	--	--	--	--				
1115	5050		101	7.8C																S

214

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM		
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	B SIO2	F	TDS SUM	TH NCH	SAR ASAR		

		F3 4100.00	SALMON R A SOMESRAP				F0581 CONTINUED														
11/10/71 1705	5050 5050	5.74	11.9 102	46.4F 8.0C	7.3 92 90	--	--	--	--	--	--	--	--	--	64AF	--				\$	
11/10/71 1710	5050 0000	2040			90	--	--	--	--	--	--	--	--	--	64E	--				\$	
12/06/71 2025	5050 0000	4200		43 F 6 C	81	--	--	--	--	--	--	--	--	--	34E	--				\$	
06/05/72 1200	5050 5050	6.60 2340	9.9 99	59.0F 15.0C	7.3 7.3 61	--	--	1.9 .08 12	--	25 .50	--	.0 .00	--	.0 2A	--			30		\$	
08/02/72 1715	5050 5050	3.81	9.0 103	71.1F 21.7C	8.2 140 128	--	--	--	--	--	--	--	--	--	0AF	--					
08/02/72 2335	5050 5050	3.80	8.3 93	68.7F 20.4C	8.0 140 126	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/03/72 0525	5050 5050	3.97	8.5 94	68.0F 20.0C	7.4 137 126	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/03/72 1040	5050 5050	3.97	9.2 104	70.0F 21.1C	7.9 143 127	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/03/72 1600	5050 5050	3.79	8.9 103	72.1F 22.3C	8.2 142 126	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/03/72 2310	5050 5050	3.78	8.1 91	69.6F 20.9C	7.8 142 126	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/04/72 0520	5050 5050	3.77	8.4 94	69.1F 20.6C	7.4 138 126	--	--	--	--	--	--	--	--	--	0AF	--				\$	
08/04/72 1035	5050 5050	3.77 350E	9.2 106	71.5F 21.9C	7.9 142 132	--	--	3.4 .15 11	--	57 1.14	--	4.0 .11	--	.0 0A	--			63		\$	

216

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD		MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER				MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM
					LABORATORY PH	EC	CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	CL	VALUE NO3	TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR				
* * * * *																							
F3		4100.00	SALMON R A SOMESBAR										F05B1 CONTINUED										
10/02/72 1300	5050 5050	3.58 208	10.0 102	60.8F 16.0C	7.9 7.8	150 151	-- --	-- --	3.7 .16 11	-- --	67 1.34	-- --	3.7 .10	-- --	.0 0A	-- --		68			S		
06/19/73 1130	5050 5050	4.45 620	9.9 101	60.8F 16.0C	7.8 7.9	93 94	12 .60 63	2.9 .24 25	1.9 .08 8	1.2 .03 3	41 .82 80	8.9 .19 19	.3 .01 1	.0 .00 0	.1 0A	-- --	80 52	42 1	0.1 0.1	E T			
10/01/73 1145	5050 5050	3.48 200	12.5 127	59.9F 15.5C	8.1	141	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 1AF	-- --							
06/10/74 1135	5050 5050	7.18 3720	10.7 102	54.5F 12.5C	7.2 7.7	49 48	6.6 .33 66	1.3 .11 22	1.2 .05 10	.4 .01 2	21 .42 95	.8 .02 5	.0 .00 0	.0 .00 0	.0 5A	-- --	37 23	22 1	0.1 0.0	E T			
10/01/74 1115	5050 0000	3.42 177	10.3 105	60.8F 16.0C	7.9	149	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 1AF	-- --				S			
06/09/75 1035	5050 0000	7.07 4400	11.0 103	53.6F 12.0C	7.9	54	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 6AF	-- --				S			
10/06/75 1100	5050 5050	2.89 184	9.9 100	59.9F 15.5C	8.2 7.8	144 140	-- --	-- --	3.5 .15 11	-- --	62 1.24	-- --	2.0 .06	-- --	.0 0A	-- --		62		S			
06/07/76 1045	5050 0000	4.78 1330	10.6 102	55.4F 13.0C	8.3	76	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 0AF	-- --				S			
10/04/76 1030	5050 0000	2.81 220	10.4 104	59.0F 15.0C	7.8	140	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 0AF	-- --				S			
06/13/77 1015	5050 5050	3.74 640	10.1 110	66 F 19 C	7.9	79	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 1AF	-- --				S			
10/11/77 1015	5050 5050	2.60 150	10.4 100	55.4F 13.0C	7.4	141	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 1AF	-- --				S			
06/05/78 1015	5050 5050	6.01 2650	10.2 100	57.2F 14.0C	8.2	53	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- --	-- 4AF	-- --				S			

MINERAL ANALYSES OF SURFACE WATER

[illegible]

MINERAL ANALYSES OF SURFACE WATER

218

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REN	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR		

F3		4100.00	SALMON R A SOMESBAR						F0581 CONTINUED											
08/27/84 2055	5050 5050		8.7 95	66 19	F C	8.1 141	--	--	--	--	--	--	--	--	1AF	--				
08/28/84 0435	5050 5050		9.0 97	65.3 18.5	F C	7.8 139	--	--	--	--	--	--	--	--	1AF	--				
08/28/84 0910	5050 5050		9.3 100	64.9 18.3	F C	7.8 138	--	--	--	--	--	--	--	--	1AF	--				
08/28/84 1315	5050 5050		9.5 107	69.8 21.0	F C	8.0 138	--	--	--	--	--	--	--	--	1AF	--				
08/28/84 1645	5050 5050		9.0 104	72.1 22.3	F C	8.1 140	--	--	--	--	--	--	--	--	0AF	--				
08/28/84 2110	5050 5050		8.8 98	68.0 20.0	F C	8.0 140	--	--	--	--	--	--	--	--	1AF	--				
08/29/84 0425	5050 5050		8.8 96	66.2 19.0	F C	7.9 140	--	--	--	--	--	--	--	--	1AF	--				
08/29/84 0900	5050 5050		9.5 103	66.0 18.9	F C	7.6 138	18 .90 64	4.0 .33 24	4.0 .17 12	-- 57 1.14	--	2.0 .06	--	.0 0A	--		62 5	0.2 0.2	S	
09/10/84 1025	5050 5050	1.86 231	10.0 109	66.2 19.0	F C	7.6 140	--	--	--	--	--	--	--	--	0A	--	80		S	
10/02/84 1515	5050 5050	1.85	10.5 108	60.8 16.0	F C	8.0 148	--	--	--	--	--	--	--	--	1AF	--			S	
10/02/84 1705	5050 5050		10.4 108	61.7 16.5	F C	8.0 148	--	--	--	--	--	--	--	--	1AF	--			S	
10/02/84 2050	5050 5050		9.7 97	59.0 15.0	F C	7.8 147	--	--	--	--	--	--	--	--	1AF	--			S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					REM
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	F SI02	TDS SUM	TH NCH	SAR ASAR		

F3		4100.00	SALMON R A SOMESBAR					F0581 CONTINUED												
10/03/84	5050		9.7	56.3F	7.8	147	--	--	--	--	--	--	--	--	--					
0355	5050		94	13.5C											1AF	--			S	
10/03/84	5050	1.83	10.4	57.6F	7.7	147	--	--	--	--	--	--	--	--	--					
0945	5050		103	14.2C											1AF	--			S	
10/22/84	5050		11.5	50.9F	7.6	129	15	4.0	3.0	--	49	--	2.0	--	.0	--	77	54	0.2	
1205	5050	424	104	10.5C	7.9	116	.75	.33	.13		.98		.06		1A	--	5	0.2		
							62	27	11											
02/26/85	5050	4.19	12.4	44.1F	7.4	98	--	--	--	--	--	--	--	--	--					
1335	5050	1660	103	6.7C											1AF	--			S	
02/26/85	5050		12.1	43.0F	7.3	99	--	--	--	--	--	--	--	--	--					
1730	5050		99	6.1C											1AF	--			S	
02/26/85	5050		12.1	43.0F	7.5	102	--	--	--	--	--	--	--	--	--					
2140	5050		99	6.1C											3AF	--			S	
02/27/85	5050		11.9	39.9F	7.7	99	--	--	--	--	--	--	--	--	--					
0655	5050		93	4.4C											1AF	--			S	
02/27/85	5050		12.5	42.1F	7.3	101	--	--	--	--	--	--	--	--	--					
0945	5050		101	5.6C											1AF	--			S	
04/15/85	5050		11.6	51.8F	7.3		7.0	2.0	1.0	--	25	--	1.0	--	.0	--	42	26	0.1	
1440	5050	4550	107	11.0C	6.4	58	.35	.16	.04		.50		.03		2A	--	1	0.0	E	
							64	29	7											
05/13/85	5050		10.3	55.0F	7.4	76	--	--	--	--	--	--	--	--	--					
1420	5050		98	12.8C											1AF	--				
05/13/85	5050		10.0	54.0F	7.6	78	--	--	--	--	--	--	--	--	--					
1615	5050		94	12.2C											1AF	--				
05/13/85	5050		11.1	53.6F	7.8	79	--	--	--	--	--	--	--	--	--					
2110	5050		104	12.0C											1AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM		
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM	
* * * * *																				
F3		4100.00	SALMON R A SOMESBAR						F0581 CONTINUED											
05/14/85 0440	5050 5050		11.0 101	52.0F 11.1C	7.2 77	--	--	--	--	--	--	--	--	--	1AF	--				
05/14/85 0905	5050 5050		11.0 100	51.0F 10.5C	7.5 78	--	--	--	--	--	--	--	--	--	1AF	--				
05/14/85 1225	5050 5050		11.0 104	54.0F 12.2C	7.6 76	--	--	--	--	--	--	--	--	--	1AF	--				
05/14/85 1620	5050 5050		10.7 103	55.8F 13.2C	7.5 76	--	--	--	--	--	--	--	--	--	1AF	--				
05/14/85 2140	5050 5050		10.5 100	54.5F 12.5C	7.8 76	--	--	--	--	--	--	--	--	--	1AF	--				
05/15/85 0535	5050 5050		10.8 97	50.0F 10.0C	7.3 74	9.0 .45 64	2.0 .16 23	2.0 .09 13	--	34 .68	--	1.0 .03	--	.0 0A	--		30 0	0.2 0.1	S	
05/15/85 0810	5050 5050		10.7 96	50.0F 10.0C	7.2 74	--	--	--	--	--	--	--	--	--	1AF	--			S	
05/15/85 1405	5050 5050		11.0 106	55.4F 13.0C	7.4 75	--	--	--	--	--	--	--	--	--	1AF	--			S	
06/04/85 1230	5050 5050	3.58 1390	11.0 109	58.1F 14.5C	7.5 80	--	--	--	--	--	--	--	--	--	1AF	--			S	
08/12/85 1330	5050 5050	1.77	9.3 107	71.6F 22.0C	8.2 137	--	--	--	--	--	--	--	--	--	1AF	--			S	
08/12/85 1720	5050 5050		9.0 107	74.3F 23.5C	8.1 139	--	--	--	--	--	--	--	--	--	1AF	--			S	
08/12/85 1945	5050 5050		8.6 99	71.1F 21.7C	8.3 136	--	--	--	--	--	--	--	--	--	1AF	--			S	

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				REMARKS	
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	SAR ASAR	REM
F3		4100.00			SALMON R A SOMESBAR														
										F0581 CONTINUED									
08/13/85 0520	5050 5050		8.7 94	66.0F 18.9C	7.3 137	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/13/85 0840	5050 5050	1.76	9.3 101	66.2F 19.0C	7.7 138	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/13/85 1330	5050 5050			71.6F 22.0C	8.0 137	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/13/85 1710	5050 5050		9.2 108	73.0F 22.8C	8.1 138	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/13/85 2020	5050 5050		8.5 97	70.7F 21.5C	8.2 137	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/14/85 0450	5050 5050		8.8 96	66.2F 19.0C	7.8 137	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/14/85 0850	5050 5050	1.74	9.3 101	66.2F 19.0C	7.5 138	--	--	--	--	--	--	--	--	-- 1AF	--				S
08/14/85 1250	5050 5050		9.2 106	71.6F 22.0C	8.1 137	--	--	--	--	--	--	--	--	-- 1AF	--				S
09/30/85 1105	5050 5050	1.71	10.3 105	60.8F 16.0C	7.8 138	--	--	--	--	--	--	--	--	-- 1AF	--				S
12/02/85 1240	5050 5050	4.98 2250	12.3 101	43.2F 6.2C	7.6 99 8.0 104	13 .65 66	3.0 .25 25	2.0 .09 9	--	46 .92	--	1.0 .03	--	.0 3AF	--		45 0	0.1 0.1	S
01/22/86 1330	5050 5050	4.96	12.5 104	44.6F 7.0C	7.3 88	--	--	--	--	--	--	--	--	-- 1AF	--				
01/22/86 1800	5050 5050			44.6F 7.0C	7.4 88	--	--	--	--	--	--	--	--	-- 1AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DD SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER					
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SIO2	TDS SUM	TH NCM	SAR ASAR	REM

F3		4100.00	SALMON R A SOMESBAR				F05B1 CONTINUED												
01/22/86	5050		12.7	44.1F	7.3	86	--	--	--	--	--	--	--	--	--				
2135	5050		105	6.7C										1AF	--				
01/23/86	5050				7.4	87	--	--	--	--	--	--	--	--	--				
0555	5050													1AF	--				
01/23/86	5050	5.32	13.2	43.0F	7.3	85	--	--	--	--	--	--	--	--	--				
0945	5050		108	6.1C										3AF	--				
02/03/86	5050	6.65	12.6	44.6F	7.5		12	3.0	2.0	--	42	--	1.0	--	.0	70	42	0.1	E
1130	5050		105	7.0C	8.1	92	.60	.25	.09		.84		.03		6A		1	0.1	
							64	27	10										
03/31/86	5050	5.70	12.2	50.0F	7.4	86	--	--	--	--	--	--	--	--	--				
1105	5050		109	10.0C										1AF	--				
F3		4154.00	IKES C NR SOMES BAR				F05A2												
12/06/71	5050			44.0F		168	--	--	--	--	--	--	--	--	--				
2035	5050			6.7C										4AF	--				
04/17/84	5050		11.7	47.3F	7.8	160	--	--	--	--	--	--	--	--	--				
1205	5050	3E	102	8.5C										0AF	--				
F3		4155.00	IRVING C NR SOMESBAR				F05C1												
11/11/71	5050			48.9F	7.3	105	--	--	--	--	--	--	--	--	--				
1330	5050	10E		9.4C										0AF	--				
04/17/84	5050		11.7	49.1F	7.6	92	--	--	--	--	--	--	--	--	--				
1240	5050	50E	105	9.5C										1AF	--				
08/29/84	5050		10.0		7.7	115	--	--	--	--	--	--	--	--	--				
1400	5050	15E												1AF	--				
10/03/84	5050		10.9	52.7F	7.5	115	--	--	--	--	--	--	--	--	--				
1045	5050	8E	102	11.5C										1AF	--				

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER				REM		
						CA	MG	NA	K	CACO3	SO4	CL	NO3	B TURB	F SIO2	TDS SUM	TH NCH	SAR ASAR		
* * * * *																				
F3 4155.00		IRVING C NR SOMESBAR								F05C1 CONTINUED										
05/15/85	5050		10.9	54.5F	7.5	104	--	--	--	--	--	--	--	--	--					
1505	5050		104	12.5C										0AF	--					
08/15/85	5050		10.2	57.2F	7.6	113	13	4.0	5.0	--	53	--	2.0	--	.0	--	49	0.3		
0850	5050	12E	101	14.0C	8.2	115	.65	.33	.22	1.06	--	.06	--	0A	--	0	0.3		S	
							54	28	18											
F3 4160.00		SANDY BAR C NR SOMESBAR								F05C1										
11/11/71	5050		48.4F	7.3	86	--	--	--	--	--	--	--	--	--	--					
1500	5050	15E	9.1C											20AF	--					
04/17/84	5050		11.8	48.2F	7.4	81	--	--	--	--	--	--	--	--	--					
1320	5050	25E	104	9.0C										14F	--					
08/29/84	5050		10.1	60.8F	7.9	127	--	--	--	--	--	--	--	--	--					
1330	5050	6E	104	16.0C										0AF	--					
05/15/85	5050		11.0	53.6F	7.4	81	--	--	--	--	--	--	--	--	--					
1515	5050		104	12.0C										0AF	--					
08/15/85	5050		10.1	59.0F	7.6	112	14	4.0	4.0	--	57	--	1.0	--	.4	--	52	0.2		
1000	5050	4E	102	15.0C	8.2	119	.70	.33	.17	1.14	--	.03	--	0A	--	0	0.3		S	
							58	28	14											
F3 4170.00		TI CREEK NR SOMESBAR								F05C1										
11/11/71	5050		48.9F	7.3	115	--	--	--	--	--	--	--	--	--	--					
1535	5050	6E	9.4C		111									14AF	--					
04/17/84	5050		11.8	48.2F	7.5	98	--	--	--	--	--	--	--	--	--					
1335	5050	30E	104	9.0C										14F	--				S	
05/17/84	5050		11.2	55.0F	7.5	98	--	--	--	--	--	--	--	--	--					
1000	5050		108	12.8C										14F	--				S	
08/29/84	5050		10.2	59.9F	7.8	134	--	--	--	--	--	--	--	--	--					
1310	5050	14E	104	15.5C										14F	--				S	

224

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. O DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER				SAR	REM
						CA	MG	NA	K	CAC03	SO4	CL	NO3	TURB	SI02	TDS SUM	TH NCH	ASAR	

F3 4180.00		INDEPENDENCE C NR CLEAR CREEK								F05C1 CONTINUED									
08/15/85	5050		10.0	60.8F	7.9 165	--	--	--	--	--	--	--	--	--	--	--	--	--	
1220	5050	6E	104	16.0C											0AF	--			
01/24/86	5050		12.6	42.9F	7.7 127	--	--	--	--	--	--	--	--	--	--	--	--	--	
1005	5050	50E	104	5.8C											1AF	--			
F3 4199.00		ELK C A MO A HAPPY CAMP								F05C1									
08/30/84	5050			62.0F	177	--	--	--	--	--	--	--	--	--	--	--	--	--	
0730	5050	30E		16.7C											0AF	--			
10/02/84	5050		11.1	52.7F	8.0 182	20	7.0	6.0	--	78	--	4.0	--	.1	--		79	0.3	
0950	5050	24E	105	11.5C	8.0 181	1.00	.58	.26		1.56	--	.11	--	1AF	--		1	0.4	S
						54	32	14											
02/26/85	5050		10.5	42.0F	7.5 120	--	--	--	--	--	--	--	--	--	--	--	--	--	
1400	5050	100E	86	5.6C											1AF	--			S
05/16/85	5050		11.5	49.1F	7.6 99	12	4.0	.0	.8	46	2.0	1.0	.1	.0	--	66	46	0.0	
0815	5050	100E	104	9.5C	7.8 101	.60	.33	.00	.02	.92	.04	.03	.00	--	--	47	1	0.0	T
						63	35	0	2	93	4	3	0						
08/15/85	5050		9.2	69.8F	8.1 168	--	--	--	--	--	--	--	--	--	--	--	--	--	
1335	5050	20E	106	21.0C											0AF	--			
01/23/86	5050		12.7	42.0F	7.4 100	--	--	--	--	--	--	--	--	--	--	--	--	--	
1515	5050	150E	104	5.6C											2AF	--			
F3 4200.00		ELK C NR HAPPY CP								F05C1									
05/13/59	5050	3.72	10.8	51.0F		13	.1	1.6	.6	34	.8	.2	.8	.01	.0		33	0.1	
1100	5050		101	10.5C	7.4 79	.65	.01	.07	.02	.68	.02	.01	.01		10.0	47	0	0.1	
						87	1	9	3	94		1	1						
09/03/59	5050		9.3	63.0F		10	14	6.0	1.7	82	7.4	4.2	.1	.08	.2		82	0.3	
1240	5050	30E	100	17.2C	7.5 187	.50	1.15	.26	.04	1.64	.15	.12	.00		21.0	114	1	0.4	
						26	59	13	2	86	8	6	0						
04/16/84	5050		11.5	47.3F	7.4 100	--	--	--	--	--	--	--	--	--	--	--	--	--	
1715	5050	300E	102	8.5C											1AF	--			

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAR	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER							
						CA	MG	NA	K	CACO3	SD4	CL	NO3	TURB	SIO2	TDS SUM	TH NCH	SAR ASAR	REM		

F3 4200.00		ELK C NR HAPPY CP				F05C1 CONTINUED															
08/30/84 0730	5050 5050				177	--	--	--	--	--	--	--	--	--	--	0AF	--				
F3 4220.00		HORSE C NR HAPPY CAMP				F05C2															
04/18/84 0930	5050 5050	6E	11.6 103	47.3F 8.5C	7.8 186	--	--	--	--	--	--	--	--	--	--	1AF	--				
F3 4221.00		CHINA C NR HAPPY CAMP				F05C2															
04/18/84 0845	5050 5050	13E	11.6 102	46.4F 8.0C	7.7 166	--	--	--	--	--	--	--	--	--	--	2AF	--				
F3 4244.00		GRIDER C WEST AT MOUTH				F05C3															
06/15/72 1500	5050 5050	8E		69.8F 21.0C	7.8 230	--	--	--	--	--	--	--	--	--	--		--				
F3 4245.00		GRIDER C NR SEIAD VALLEY				F05C3															
09/21/71 1030	5050 5050	5E			7.4 215	--	--	--	--	--	--	--	--	--	--	1AF	--				
06/15/72 1525	5050 5050	20E		62.6F 17.0C	7.6 170 154	--	--	--	--	--	--	--	--	--	--	0AF	--				
04/18/84 0935	5050 5050	200E	11.8 101	44.6F 7.0C	7.8 156	--	--	--	--	--	--	--	--	--	--	1AF	--				
08/30/84 1100	5050 5050	10E	10.0 103	59.0F 15.0C	8.0 219 8.1 222	27 1.35 60	9.0 .74 33	4.0 .17 8	--	103 2.06	--	2.0 .06	--	.0 0A	--		105 2	0.2 0.3			
08/15/85 1535	5050 5050	12E	9.1 101	65.3F 18.5C	8.1 215	--	--	--	--	--	--	--	--	--	--	0AF	--				

S

S

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN				MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER PERCENT REACTANCE VALUE				MILLIGRAMS PER LITER						
						CA	MG	NA	K	CACO3	SO4	CL	NO3	TURB	SiO2	TDS SUM	TH NCM	SAR ASAR	REM	

F3		4250.00	WALKER C NR SEIAD VALLEY				F05C3													
09/21/71 1000	5050 5050				7.5 225	--	--	--	--	--	--	--	--	--	--					
														DAF	--					
06/15/72 1610	5050 5050			65.3F 18.5C	7.8 170	--	--	--	--	--	--	--	--	--	--					
04/18/84 1120	5050 5050	24E	11.7 102	45.5F 7.5C	7.7 140	--	--	--	--	--	--	--	--	--	--					
														4AF	--					
08/30/84 1150	5050 5050	7E	9.8 100	57.2F 14.0C	7.9 188 8.0 192	18 .90 46	10 .82 42	5.0 .22 11	--	89 1.78	--	1.0 .03	--	.0 1A	--		86 0	0.2 0.3	S	
02/26/85 0940	5050 5050	20E	10.9 86	38.0F 3.3C	7.7 149	--	--	--	--	--	--	--	--	--	--					
														1AF	--					
08/15/85 1515	5050 5050	5E	9.2 100	62.6F 17.0C	7.9 185	--	--	--	--	--	--	--	--	--	--					
														1AF	--					
01/23/86 1325	5050 5050	40E	11.7 97	42.0F 5.6C	7.9 157	--	--	--	--	--	--	--	--	--	--					
														1AF	--					
F3		4253.00	O'NEIL C AT MOUTH				F05C3													
06/15/72 1740	5050 5050	5E		57.2F 14.0C	7.5 162	--	--	--	--	--	--	--	--	--	--					
04/18/84 1130	5050 5050	15E	11.7 101	44.6F 7.0C	7.8 132	--	--	--	--	--	--	--	--	--	--					
														2AF	--					
08/30/84 1120	5050 5050	2E		59.0F 15.0C	194	--	--	--	--	--	--	--	--	--	--					
														0AF	--					
02/26/85 0900	5050 5050	10E	10.6 83	38.0F 3.3C	7.7 154	--	--	--	--	--	--	--	--	--	--					
														1AF	--					

MINERAL ANALYSES OF SURFACE WATER

DATE TIME	SAMPLER LAB	G.H. Q DEPTH	DO SAT	TEMP	FIELD LABORATORY PH EC	MINERAL CONSTITUENTS IN					MILLIGRAMS PER LITER MILLIEQUIVALENTS PER LITER				MILLIGRAMS PER LITER						REM			
						CA	MG	NA	K	PERCENT CACO3	REACTANCE SO4	VALUE CL	NO3	B TURB	F SI02	TDS SUM	TH NCH	SAR ASAR						

F3		4253.00	O'NEIL C AT MOUTH					F05C3 CONTINUED																
05/16/85	5050		11.0	50.9F	7.9	153	--	--	--	--	--	--	--	--	--									
1000	5050		103	10.5C											OAF	--								
08/15/85	5050		9.1	62.6F	7.6	200	13	18	3.0	--	108	--	1.0	--	.0	--			107	0.1				
1600	5050		99	17.0C	8.5	209	.65	1.48	.13	--	2.16	--	.03	--	0A	--			0	0.2				
							29	65	6															S
F3		4255.00	MILL C AT MOUTH					F05C3																
06/15/72	5050			60.8F	7.5	195	--	--	--	--	--	--	--	--	--	--								
1800	5050	2E		16.0C												--								
F3		4257.00	MACKS C AT MOUTH					F05C3																
06/16/72	5050			53.6F	7.7	182	--	--	--	--	--	--	--	--	--	--								
1020	5050	8E		12.0C												--								

APPENDIX B

Nutrient Analysis of Surface Water

233

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER						D O-PO4 T O-PO4	D TOT P T TOT P	REM

F3 1220.01			KLAMATH R A ORLEANS					F05A2 CONTINUED									
05/01/84	5050	7.50	11.0C	128	5AF		0.06	--	--	0.00		--	0.01	--			
1215	5050			7.6				--	--	--	0.2	--	--	0.02			
05/18/84	5050	8.08	13.2C	120	4AF		0.05	--	--	--		--	0.01	--			
0830	5050			7.7				--	--	--	0.2	--	--	0.03			
08/29/84	5050		21.0C	196	2AF		0.01	--	--	--		--	0.03	--			
0925	5050			8.1				--	--	--	0.4	--	--	0.07			
10/03/84	5050	1.97	16.0C	231	2AF		0.18	--	--	--		--	--	--			
1005	5050			8.0				--	--	--	0.6	--	--	0.12			
10/22/84	5050	3.93	13.0C	184	6AF		0.52	--	--	--		--	0.09	--			
1140	5050			8.0				--	--	--	0.6	--	--	0.14			
02/27/85	5050		43.0F	151	4AF		0.20	--	--	--		--	0.01	--			
1030	5050			7.6				--	--	--	0.3	--	--	0.04			
05/15/85	5050		54.0F	135	1AF		0.00	--	--	--		--	0.01	--			
0605	5050			7.7				--	--	--	0.1	--	--	0.02			
08/14/85	5050	1.22	22.0C	184	3AF		0.00	--	--	--		--	0.04	--			
0920	5050			8.1				--	--	--	0.5	--	--	0.08			
F3 1300.00			KLAMATH R A SOMESRAR					F05A2									
05/09/55	5050		62.0F				--	--	--	--		--	0.00	--			
2000	5000	9860		6.8				--	--	--	--	--	--	--			
05/09/56	5050		56.0F				--	--	--	--		--	0.05	--			
1300	5000	19800						--	--	--	--	--	--	--			
09/12/56	5050		69.0F				--	--	--	--		--	0.16	--			
1630	5000	2530		7.1				--	--	--	--	--	--	--			
05/10/57	5050		56.0F				--	--	--	--		--	0.05	--			
1500	5000	10800		6.9				--	--	--	--	--	--	--			
09/12/57	5050		72.0F				--	--	--	--		--	0.15	--			
1230	5000	2830		7.9				--	--	--	--	--	--	--			
05/07/58	5050		59.0F				--	--	--	--		--	0.03	--			
1245	5000	19100		8.0				--	--	--	--	--	--	--			
09/10/58	5050		70.0F				--	--	--	--		--	0.03	--			
1215	5000	4400		8.6				--	--	--	--	--	--	--			
05/06/59	5050	7.64	12.7C										0.02				
1030	5000			7.6													

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER						D O-PO4 T O-PO4	D TOT P T TOT P	PEM
						P ALK T ALK			D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.PO4					

NUTRIENT ANALYSES OF SURFACE WATER

236

NUTRIENT ANALYSES OF SURFACE WATER

237

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	G.H.I Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD		D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER							D O-PO4 T O-PO4	D TOT P T TOT P	REM
						P ALK T ALK				D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.PO4						

F3 1430.00				KLAMATH R NR SEIAD VLY						F05C2 CONTINUED									
05/09/61	5050	4.94	14.4C					--	--	--	--			--		0.05	--		
1310	5000	3420		8.3										--		--	--		
09/12/61	5050	3.70	18.3C					--	--	--	--			--		0.15	--		
0935	5000	1860		7.9										--		--	--		
05/16/62	5050	4.92	13.9C					--	--	--	--			--		0.02	--		
1335	5000	3390		8.3										--		--	--		
08/14/62	5050	3.02	22.8C					--	--	--	--			--		0.13	--		
1210	5000	1240		8.2										--		--	--		
09/13/62	5050	3.23	19.4C					--	--	--	--			--		--	--		
1135	5000	1430		8.3										--		--	0.00		
10/04/62	5050	3.79	16.7C					--	--	--	--			--		--	--		
1230	5000	1970		8.2										--		--	0.08		
11/15/62	5050	5.79	9.4C					--	--	--	--			--		--	--		
1210	5000	4550		7.4										--		--	0.06		
12/12/62	5050	6.48	6.1C					--	--	--	--			--		--	--		
1220	5000	5640		7.5										--		--	0.07		
01/03/63	5050	6.01	6.1C					--	--	--	--			--		--	--		
1200	5000	5120		7.6										--		--	0.05		
02/14/63	5050	6.28	7.2C					--	--	--	--			--		--	--		
1150	5000	5300		7.7										--		--	0.05		
03/06/63	5050	6.02	8.3C					--	--	--	--			--		--	--		
1305	5000	4870		7.9										--		--	0.10		
04/09/63	5050	7.32	8.9C					--	--	--	--			--		--	--		
1210	5000	7120		7.6										--		--	0.03		
05/02/63	5050	6.80	9.4C					--	--	--	--			--		--	--		
1130	5000	6300		7.7										--		--	0.07		
06/04/63	5050	4.66	14.4C					--	--	--	--			--		--	--		
0800	5000	2870		7.4										--		--	0.05		
07/10/63	5050	3.20	19.4C					--	--	--	--			--		--	--		
0900	5000	1400		7.6										--		--	0.07		
08/07/63	5050	3.15	22.2C					--	--	--	--			--		--	--		
0905	5000	1350		8.0										--		--	0.13		

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H.I Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER					D O-PO4 T O-PO4	D TOT P T TOT P	REM		
* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	* * * * *	D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.P04	* * * * *	* * * * *	* * * * *			
F3 1430.00			KLAMATH R NR SEIAD VLY					F05C2 CONTINUED										
09/11/63	5050	3.41	20.0C				--	--	--	--	--	--	0.08	--				
1045	5000	1590		8.0				--	--	--	--	--	--	--				
10/09/63	5050	3.90	17.2C				--	--	--	--	--	--	0.13	--				
1100	5000	2000		8.0				--	--	--	--	--	--	--				
11/06/63	5050	4.25	11.7C				--	--	--	--	--	--	--	--				
1235	5000	2380		8.0				--	--	--	--	--	--	0.16				
12/04/63	5050	5.53	6.1C				--	--	--	--	--	--	--	--				
1215	5000	4300		7.8				--	--	--	--	--	--	0.15				
01/07/64	5050	5.62	5.6C				--	--	--	--	--	--	0.08	--				
1305	5000	4360		7.6				--	--	--	--	--	--	--				
02/04/64	5050	6.22	4.4C				--	--	--	--	--	--	0.13	--				
1225	5000	5420		7.7				--	--	--	--	--	--	--				
03/05/64	5050	4.66	7.2C				--	--	--	--	--	--	0.07	--				
1215	5000	3040		7.9				--	--	--	--	--	--	--				
04/08/64	5050	5.97	10.0C				--	--	--	--	--	--	0.08	--				
1100	5000	5000		8.0				--	--	--	--	--	--	--				
05/06/64	5050	4.20	10.0C				--	--	--	--	--	--	--	--				
1105	5000	2430		8.4				--	--	--	--	--	--	0.03				
06/10/64	5050	4.64	15.6C				--	--	--	--	--	--	0.10	--				
1135	5000	3000		8.2				--	--	--	--	--	--	--				
07/07/64	5050	3.08	22.2C				--	--	--	--	--	--	0.07	--				
1140	5000	1290		8.4				--	--	--	--	--	--	--				
08/05/64	5050		22.2C				--	--	--	--	--	--	0.13	--				
1105	5000	1240		8.2				--	--	--	--	--	--	--				
09/02/64	5050	3.31	17.8C				--	--	--	--	--	--	0.16	--				
1130	5000	1500		8.4				--	--	--	--	--	--	--				
10/06/64	5050	3.39	16.7C				--	--	--	--	--	--	0.15	--				
1140	5000	1570		8.2				--	--	--	--	--	--	--				
11/11/64	5050	4.07	10.0C				--	--	--	--	--	--	0.16	--				
1135	5000	2270		7.9				--	--	--	--	--	--	--				
12/08/64	5050	5.11	6.7C				--	--	--	--	--	--	0.11	--				
1205	5000	3660		7.8				--	--	--	--	--	--	--				

240

[illegible]

NUTRIENT ANALYSES OF SURFACE WATER

[illegible]

242

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER					D O-PO4 T O-PO4	D TOT P T TOT P	REM
									D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.P04				

F3 1430.00			KLAMATH R NR SEIAD VLY					F05C2 CONTINUED								
05/12/70	5050		9.5C				--	--	--	--	--	--	--	0.01	--	
1630	5050	3130		8.3			--	0.32	--	--	--	--	--	--	--	
06/16/70	5050		18.5C				--	--	--	--	--	--	--	0.06	--	
1400	5050	1910		8.4			--	0.04	--	--	--	--	--	--	--	
07/13/70	5050		21.7C				--	--	--	--	--	--	--	0.06	--	
1230	5050	1100		8.2			--	0.0	--	--	--	--	--	--	--	
08/03/70	5050		22.0C				--	--	--	--	--	--	--	0.06	--	
1325	5050	1280		8.4			--	0.25	--	--	--	--	--	--	--	
08/31/70	5050		23.3C				--	--	--	--	--	--	--	0.12	--	
1355	5050	1170		8.4			--	0.0	--	--	--	--	--	--	--	
10/06/70	5050		57 F		2E		--	--	--	--	--	--	--	0.12	--	
1245	5050	1560		8.4			--	0.27	--	--	--	--	--	--	--	
11/16/70	5050		9.0C		6E		--	--	--	--	--	--	--	0.09	--	
1345	5050	4040		7.9			--	0.79	--	--	--	--	--	--	--	
01/12/71	5050		37 F		9E		--	--	--	--	--	--	--	0.05	--	
1415	5050	5740		7.3			--	0.70	--	--	--	--	--	--	--	
02/17/71	5050		43 F		12E		--	--	--	--	--	--	--	0.03	--	
1215	5050	5910		7.7			--	0.27	--	--	--	--	--	--	--	
03/15/71	5050		43 F		19E		--	--	--	--	--	--	--	0.01	--	
1445	5050	7160		7.9			--	0.18	--	--	--	--	--	--	--	
04/13/71	5050		50 F		55E		--	--	--	--	--	--	--	0.01	--	
1145	5050	10800		7.6			--	0.14	--	--	--	--	--	--	--	
05/10/71	5050		13 C		11E		--	--	--	--	--	--	--	0.04	--	
1450	5050	12700		7.8			--	0.16	--	--	--	--	--	--	--	
06/03/71	5050		14.5C		25E		--	--	--	--	--	--	--	0.02	--	
1140	5050	8140		7.8			--	0.00	--	--	--	--	--	--	--	
07/06/71	5050		19.5C		2E		--	--	--	--	--	--	--	0.01	--	
1430	5050	2240		8.1			--	0.00	--	--	--	--	--	--	--	
08/05/71	5050		22 C		2E		--	--	--	--	--	--	--	0.02	--	
1120	5050	1500		8.3			--	0.05	--	--	--	--	--	--	--	
09/21/71	5050		18 C		2E		--	--	--	--	--	--	--	0.12	--	
1450	5050	2080		8.2			--	0.32	--	--	--	--	--	--	--	

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD		D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER						
						P ALK T ALK	D NO2 + NO3			D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.P04	D O-P04 T O-P04	D TOT P T TOT P	REM
F3 1430.00 KLAMATH R NR SETAD VLY F05C2 CONTINUED																
09/22/71	5050		14.8C	210	6E			--	--	--	--	--	--	0.14	--	
0800	5050			7.5					0.35	--	--	0.6	--	--	0.19	
10/12/71	5050		15.0C	206				--	--	--	--	--	--	0.13	--	
1145	5050	3300		7.9					0.70	--	--	--	--	--	--	
11/16/71	5050		6.5C	202				--	--	--	--	--	--	0.10	--	
1445	5050	3840		7.5					0.81	--	--	--	--	--	--	
12/06/71	5050		6.0C	207				--	--	--	--	--	--	0.08	--	
1130	5050	6820		7.3					1.35	--	--	--	--	--	--	
03/06/72	5050		7.2C	199				--	--	--	--	--	--	0.05	--	
1335	5050	24400		7.6					0.47	--	--	--	--	--	--	
06/16/72	5050		17.5C	200				--	--	--	--	--	--	0.03	--	
0830	5050	2420		7.9					0.06	--	--	0.3	--	--	0.06	
09/08/72	5050		18.5C	201				--	--	--	--	--	--	0.14	--	
0945	5050	1600		7.9					0.18	--	--	--	--	--	--	
03/13/73	5050		7.0C					--	--	--	--	--	--	0.10	--	
1545	5050			7.9					0.77	--	--	0.5	--	--	0.12	
09/07/73	5050		18.0C	208				--	--	--	--	--	--	0.13	--	
0910	5050	850 E		8.4					0.09	--	--	--	--	--	--	
10/15/73	5050		14.5C	274				--	--	--	--	--	--	0.18	--	
1120	5050			8.0					0.42	--	--	--	--	--	--	
11/15/73	5050		8.5C	181	13A			--	--	--	--	--	--	0.09	--	
1105	5050			8.1					0.40	--	--	--	--	--	--	
01/14/74	5050		5.0C	160	110A			--	--	--	--	--	--	0.04	--	
1425	5050			7.4					0.45	--	--	--	--	--	--	
05/07/74	5050		14.0C					--	--	--	--	--	--	0.03	--	
1320	5050			8.4					0.12	--	--	0.2	--	--	0.12	
03/18/75	5050		3.0C	172	104AF			--	--	--	--	--	--	0.10	--	
1505	5050			7.7					0.40	--	--	1.0	--	--	0.40	
06/03/75	5050		16.0C	116	25A			--	--	--	--	--	--	0.01	--	
1215	5050			7.8					0.15	--	--	--	--	--	--	
12/02/75	5050		7.0C	162	2A			--	--	--	--	--	--	0.08	--	
1230	5050			7.6					0.66	--	--	--	--	--	--	

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER					D O-PO4 T O-PO4	D TOT P T TOT P	REM	

F3 1430.00			KLAMATH R NR SEIAD VLY					F05C2 CONTINUED									
12/07/76	5050		42.0F	218			--	--	--	--			--	0.14	--		
0815	5050			7.7				1.1	--	--			--	--	--		
05/12/77	5050		13.0C	342			--	--	--	--			--	0.04	--		
0915	5050			8.2				0.09	--	--			--	--	--		
02/06/78	5050		6.0C	170			--	--	--	--			--	0.06	--		
1045	5050			7.6				0.42	--	--			--	--	--		
08/14/79	5050		21.0C	182			0.22	--	--	--			--	0.10	--		
0955	5050			8.1				--	--	--			--	--	--		
08/13/80	5050		24.0C	217			0.01	--	--	--			--	0.11	--		
1810	5050			8.7				--	--	--			--	--	--		
11/17/81	5050		8.5C	140			0.24	--	--	--			--	0.09	--		
1500	5050			7.5				--	--	--			--	--	--		
09/13/82	5050		20.0C	230	2AF		0.15	--	--	--			--	0.11	--		
1545	5050			8.4				--	--	--			--	--	--		
12/06/82	5050		6.0C	170	7AF		0.64	--	--	--			--	0.06	--		
1335	5050			7.5				--	--	--	0.7		--	--	0.11		
01/10/83	5050		3.5C	198	7AF		0.49	--	--	--			--	0.05	--		
1435	5050			7.8				--	--	--	000.5000		--	--	0.08		
05/17/83	5050		13.5C	171	4AF		0.06	--	--	--			--	0.01	--		
1350	5050			8.0				--	--	--	0.4		--	--	0.05		
09/12/83	5050		20.5C	223	1AF		0.17	--	--	--			--	0.08	--		
1240	5050			8.2				--	--	--	0.6		--	--	0.14		
02/22/84	5050		6.0C	243	8AF		0.40	--	--	--			--	0.05	--		
1450	5050			7.8				--	--	--	0.7		--	--	0.10		
04/18/84	5050		10.0C	163	8AF		0.13	--	--	--			--	--	--		
1005	5050			7.7				--	--	--	0.4		--	--	0.07		
05/18/84	5050		13.5C	147	3AF		0.11	--	--	--			--	0.03	--		
1045	5050			7.6				--	--	--	0.3		--	--	0.06		
08/30/84	5050		20.5C	220			0.16	--	--	--			--	0.10	--		
1020	5050			8.1				--	--	--	0.7		--	--	0.12		
10/03/84	5050		16.7C	256	2AF		0.34	--	--	--			--	--	--		
1300	5050			8.2				--	--	--	0.7		--	--	0.18		

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER						D O-PO4 T O-PO4	D TOT P T TOT P	REM

F3 1430.00				KLAMATH R NR SEIAD VLY					F05C2 CONTINUED								
12/17/84	5050		4.5C	213	6AF		0.60	--	--	--		--	0.04	--			
1545	5050			7.5				--	--	--	1.1	--	--	0.09			
05/14/85	5050		59.0F	170	2AF		0.00	--	--	--		--	0.02	--			
1910	5050			8.2				--	--	--	0.3	--	--	0.04			
08/14/85	5050		21.5C	203	4AF		0.16	--	--	--		--	0.10	--			
0835	5050			7.9				--	--	--	0.7	--	--	0.15			
02/19/86	5050		7.0C	153	96AF		0.27	--	--	--		--	0.05	--			
1410	5050			7.6				--	--	--	0.5	--	--	0.11			
F3 1460.00				KLAMATH R A SARAH TOTTON CAMPGROUN					F05C3								
08/26/81	5050		21.0C	205			0.06	--	--	--		--	0.16	--			
1110	5050			8.2				--	--	--	0.9	--	--	0.21			
02/25/82	5050		6.0C	175			0.35	--	--	--		--	--	--			
1140	5050			7.6				--	--	--	0.8	--	--	0.22			
04/25/83	5050		9.5C		7AF		0.10	--	--	--		--	0.02	--			
1600	5050			7.9				--	--	--	0.4	--	--	0.06			
04/18/84	5050		10.5C	166	8AF		0.13	--	--	--		--	--	--			
1145	5050			7.8				--	--	--	0.4	--	--	0.07			
05/18/84	5050		14.0C	158	5AF		0.11	--	--	--		--	0.03	--			
1115	5050			7.7				--	--	--	0.9	--	--	0.07			
08/30/84	5050		21.0C	215			0.07	--	--	--		--	0.08	--			
1210	5050			8.2				--	--	--	1.0	--	--	0.13			
02/26/85	5050		41.0F	205	6AF		0.51	--	--	--		--	0.03	--			
1225	5050			8.2				--	--	--	0.4	--	--	0.08			
05/14/85	5050		59.0F	172	2AF		0.00	--	--	--		--	0.02	--			
1845	5050			8.2				--	--	--	0.2	--	--	0.04			
F3 2260.00				DILLON C NR SOMESBAR					F05C1								
05/18/84	5050		9.0C	66	0AF		0.00	--	--	--		--	0.00	--			
0645	5050	250 E		7.3				--	--	--	0.0	--	--	0.01			
08/29/84	5050		62.0F	116	1AF		0.01	--	--	--		--	0.00	--			
0740	5050			7.7				--	--	--	0.0	--	--	0.01			
05/15/85	5050		47.0F	75	0AF		0.00	--	--	--		--	0.00	--			
0405	5050			7.6				--	--	--	0.0	--	--	0.00			

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H. Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER						D O-PO4 T O-PO4	D TOT P T TOT P	REN

F3 2299.00			INDIAN C NR HAPPY CAMP						F05C2								
04/16/84	5050		8.5C	98	1AF		0.03	--	--	--		--	--	--	--	--	
1510	5050	350 E		7.3				--	--	--	0.1	--	--	--	0.01		
F3 2315.00			CLEAR C NR HAPPY CAMP						F05C1								
05/18/84	5050		9.5C	75	0AF		0.00	--	--	--		--	0.00	--	--	--	
0840	5050	250 E		7.6				--	--	--	0.0	--	--	--	0.01		
08/30/84	5050		17.0C	122			0.02	--	--	--		--	0.00	--	--	--	
0815	5050			7.5				--	--	--	0.0	--	--	--	0.00		
05/14/85	5050		52.0F	82	1AF		0.00	--	--	--		--	0.00	--	--	--	
2030	5050			7.2				--	--	--	0.0	--	--	--	0.00		
F3 2329.00			INDIAN C AT MOUTH						F05C2								
05/18/84	5050		8.5C	102	1AF		0.02	--	--	--		--	0.00	--	--	--	
0750	5050	150 E		7.9				--	--	--	0.0	--	--	--	0.01		
08/30/84	5050		17.5C	165			0.01	--	--	--		--	0.00	--	--	--	
0725	5050			7.6				--	--	--	0.0	--	--	--	0.01		
02/26/85	5050		40.5F	112	2AF		0.00	--	--	--		--	0.00	--	--	--	
1335	5050			8.1				--	--	--	0.1	--	--	--	0.01		
05/14/85	5050		54.0F	102	1AF		0.00	--	--	--		--	0.00	--	--	--	
2000	5050			7.8				--	--	--	0.0	--	--	--	0.00		
F3 4100.00			SALMON R A SOMESBAR						F05B1								
05/06/59	5050	4.80	10.6C				--	--	--	--		--	0.00	--	--	--	
0945	5000			7.4				--	--	--	--	--	--	--	--	--	
06/03/59	5050	4.72	13.3C				--	--	--	--		--	0.00	--	--	--	
0750	5000			7.5				--	--	--	--	--	--	--	--	--	
09/10/59	5050	3.16	21.1C				--	--	--	--		--	0.0	--	--	--	
0945	5000			7.5				--	--	--	--	--	--	--	--	--	
05/02/60	5050		11.7C				--	--	--	--		--	0.02	--	--	--	
1650	5000			7.7				--	--	--	--	--	--	--	--	--	
09/15/60	5050	3.13	20.0C				--	--	--	--		--	0.02	--	--	--	
1505	5000	157		8.1				--	--	--	--	--	--	--	--	--	
05/08/61	5050	4.97	11.1C				--	--	--	--		--	0.00	--	--	--	
1615	5000	2170		7.3				--	--	--	--	--	--	--	--	--	

248

[illegible]

NUTRIENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	G.H.I Q	TEMP DEPTH	F EC F PH	TURB F CO2	FIELD P ALK T ALK	D NO2 + NO3	D NO2 D NO3	CONSTITUENTS IN MILLIGRAMS PER LITER							D O-PO4 T O-PO4	D TOT P T TOT P	REM
									D ORG N T ORG N	D NH3 T NH3	T NH3 + ORG N	DIS A.H.P04						

F3		4100.00		SALMON R A SOMESBAR				F05B1 CONTINUED										
04/15/85	5050		11.0C	58	2A		0.02	--	--	--		--		0.01	--			
1440	5050			7.3				--	--	--	0.1	--		--		0.01		
05/15/85	5050		90.0F	78	0AF		0.00	--	--	--		--		0.00	--			
0535	5050			7.3				--	--	--	0.0	--		--		0.00		
02/03/86	5050	6.65	7.0C				0.01	--	--	--		--		0.00	--			
1130	5050			7.5				--	--	--	0.1	--		--		0.02		
F3		4199.00		ELK C A MD A HAPPY CAMP				F05C1										
10/02/84	5050		11.5C	182	1AF		0.00	--	--	--		--		--	--			
0950	5050	24 E		8.0				--	--	--	0.1	--		--		0.01		

APPENDIX C

Miscellaneous Constituents in Surface Water

MISCELLANEOUS ANALYSES OF SURFACE WATER

SET S																	
DATE	SAMP	TEMP	DO	F-PH	DISCH	DEPTH	T+L	D+G	ML/L	BOD	COD	CYANIDE	TOC	IOIOIE	BROMIDE	T SULF	CC EXT
TIME	LAR	EC	G.H.	L-PH	HRAS	TURR	CHLOR	COLOR	MG/L	SUS S	V SUS S	PHENOLS	DOC	T ODOR	SULFITE	D SULF	CA EXT
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
		F3	1220.01					KLAMATH R A ORLEANS				F05A2					
05/11/64	5050	12.8C	11.4	7.8	8780												
1150	5000				0.0 A												
09/14/64	5050	18.3C	10.3	8.0	1910												
1300	5000				0.0 A												
05/10/65	5050	56.0F	10.2	7.8	9500 E												
1310	5000				0.0 A												
09/20/65	5050	62.0F	10.3	8.1	1530 E												
1310	5000				0.0 A												
05/19/66	5050	13.9C	10.1	7.0	9750												
0945	5000				0.0 A												
05/08/67	5050	11.4C	11.9	7.6	19400												
1210	5000				0.0 A												
05/18/64	5050	13.2C	10.9	7.7													
0830	5050	120	8.08		--					6	5	1					
08/29/64	5050	21.9C	9.0	8.1													
0925	5050	196			--					7	5	2					
02/27/65	5050	43.0F	12.6	7.6													
1000	5050	151			--					4	5	3					
05/15/65	5050	54.0F	10.3	7.7						0.8	8		2.8				
1605	5050	135			--					3	5	2					
		F3	1300.00					KLAMATH R A SOMESBAR				F05A2					
08/05/63	5050	24.4C	9.6	7.5													
0920	5050		8.81		--			0									
05/08/61	5050	12.2C	11.0	7.9	8700												
1645	5000		8.63		0.0 A												
09/06/61	5050	21.1C	9.1	8.1	1360												
1330	5000		4.19		0.0 A												
05/18/62	5050	12.8C	10.9	7.5	10200												
1135	5000		9.23		0.0 A												
09/04/62	5050	22.8C	8.9	8.2	1850												
1440	5000		4.54		0.0 A												
05/05/63	5050	10.0C	12.1	7.5	26500												
1145	5000		15.30		0.0 A												

MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	TEMP EC	DO G.M.	F-PH L-PH	DISCH MBS	DEPTH TURB	T+L CHLOR	D+G COLOR	SET S ML/L MG/L	ROD SUS S	COD V SUS S	CYANIDE PHENOLS	TOC DOC	IODIDE T ODO	BROMIDE SULFITE	T SULF D SULF	CC EXT CA EXT
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1300.00		KLAMATH R A SOMESBAR				F05A2 CONTINUED											
09/02/63	5050	21.7C	9.2	8.0	2240		--	--	--	--	--	--	--	--	--	--	--
1250	5000		5.49		0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/11/64	5050	13.3C	11.0	8.1	8780		--	--	--	--	--	--	--	--	--	--	--
1243	5000				0.1 A		--	--	--	--	--	--	--	--	--	--	--
F3 1302.00		KLAMATH R AB SALMON RIVER				F05A2											
08/29/84	5050	68.0F	9.5	7.9			--	--	--	--	--	--	--	--	--	--	--
0845	5050	204			--		--	--	--	11 5	4	--	--	--	--	--	--
05/15/85	5050	55.0F	10.7	7.9			--	--	--	--	--	--	--	--	--	--	--
0515	5050	153			--		--	--	--	4 5	2	--	--	--	--	--	--
F3 1327.00		KLAMATH R AB TI CREEK				F05C1											
08/29/84	5050	69.0F	8.6	8.1			--	--	--	--	--	--	--	--	--	--	--
0815	5050	204			--		--	--	--	7 5	2	--	--	--	--	--	--
02/27/85	5050	42.0F	12.1	7.5			--	--	--	--	--	--	--	--	--	--	--
0900	5050	164			--		--	--	--	4 5	3	--	--	--	--	--	--
05/15/85	5050	56.0F	10.0	8.0			--	--	--	--	--	--	2.5	--	--	--	--
0445	5050	150			--		--	--	--	4 5	2	--	--	--	--	--	--
08/14/85	5050	21.0C	8.5	8.2			--	--	--	--	--	--	--	--	--	--	--
0805	5050	196			--		--	--	--	12 5	5	--	--	--	--	--	--
F3 1330.00		KLAMATH R AB DILLON C				F05C1											
08/29/84	5050	70.0F	8.3	8.3			--	--	--	--	--	--	--	--	--	--	--
0750	5050	204			--		--	--	--	10 5	2	--	--	--	--	--	--
02/27/85	5050	43.0F	12.1	7.6			--	--	--	--	--	--	--	--	--	--	--
0845	5050	181			--		--	--	--	6 5	3	--	--	--	--	--	--
05/15/85	5050	55.0F	10.7	8.2			--	--	--	1.3 8	--	--	2.7	--	--	--	--
0400	5050	158			--		--	--	--	3 5	2	--	--	--	--	--	--
F3 1333.00		KLAMATH R AB INDEPENDENCE CREEK				F05C1											
08/30/84	5050	20.5C	9.9	7.9			--	--	--	--	--	--	--	--	--	--	--
0830	5050	212			--		--	--	--	7 5	6	--	--	--	--	--	--
02/26/85	5050	42.0F	12.1	8.0			--	--	--	--	--	--	--	--	--	--	--
1445	5050	171			--		--	--	--	4 5	2	--	--	--	--	--	--
05/14/85	5050	58.0F	9.9	8.4			--	--	--	--	--	--	--	--	--	--	--
2050	5050	156			--		--	--	--	5 5	3	--	--	--	--	--	--

MISCELLANEOUS ANALYSES OF SURFACE WATER

SET S																	
DATE	SAMP	TEMP	DO	F-PH	DISCH	DEPTH	T+L	O+G	ML/L	BOD	COD	CYANIDE	TOC	IODIDE	BROMIDE	T SULF	CC EXT
TIME	LAR	EC	G.H.	L-PH	NRAS	TURB	CHLOR	COLOR	MG/L	SUS S	V SUS S	PHENOLS	DOC	T DOOR	SULFITE	D SULF	CA EXT
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1336.00		KLAMATH R AB OAK FLAT CREEK								F05C1							
05/18/84	5050	13.5C	10.1	7.7			--	--	--	--	--	--	--	--	--	--	--
0820	5050	142			--		--	--	--	12 5	2	--	--	--	--	--	--
08/30/84	5050	20.5C	8.7	7.9			--	--	--	--	--	--	--	--	--	--	--
0745	5050	210			--		--	--	--	9 5	3	--	--	--	--	--	--
02/26/85	5050	42.0F	12.7	8.1			--	--	--	--	--	--	--	--	--	--	--
1400	5050	188			--		--	--	--	6 5	3	--	--	--	--	--	--
05/14/85	5050	58.0F	10.0	8.3			--	--	--	1.2 8	--	--	3.6	--	--	--	--
2015	5050	154			--		--	--	--	9 5	3	--	--	--	--	--	--
08/14/85	5050	22.0C	8.7	8.3			--	--	--	--	--	--	--	--	--	--	--
1040	5050	202			--		--	--	--	1 5	1	--	--	--	--	--	--
F3 1395.00		KLAMATH R AB HAPPY CAMP								F05C2							
05/18/84	5050	14.5C	10.3	7.7			--	--	--	--	--	--	--	--	--	--	--
1015	5050	153			--		--	--	--	8 5	2	--	--	--	--	--	--
08/30/84	5050	20.5C	9.0	8.0			--	--	--	--	--	--	--	--	--	--	--
0900	5050	215			--		--	--	--	10 5	4	--	--	--	--	--	--
05/14/85	5050	59.0F	10.0	8.0			--	--	--	--	--	--	3.8	--	--	--	--
1940	5050	171			--		--	--	--	8 5	3	--	--	--	--	--	--
F3 1430.00		KLAMATH R NR SEIAD VLY								F05C2							
05/09/61	5050	14.4C	10.1	8.3	3420		--	--	--	--	--	--	--	--	--	--	--
1310	5000	4.94			0.0 A		--	--	--	--	--	--	--	--	--	--	--
09/12/61	5050	18.3C	8.9	7.9	1860		--	--	--	--	--	--	--	--	--	--	--
0935	5000	3.70			0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/16/62	5050	13.9C	10.7	8.3	3390		--	--	--	--	--	--	--	--	--	--	--
1335	5000	4.92			0.0 A		--	--	--	--	--	--	--	--	--	--	--
09/13/62	5050	19.4C	10.1	8.3	1430		--	--	--	--	--	--	--	--	--	--	--
1135	5000	3.23			0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/02/63	5050	9.4C	10.9	7.7	6300		--	--	--	--	--	--	--	--	--	--	--
1130	5000	6.80			0.0 A		--	--	--	--	--	--	--	--	--	--	--
09/11/63	5050	20.0C	9.5	8.0	1590		--	--	--	--	--	--	--	--	--	--	--
1045	5000	3.41			0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/06/64	5050	10.0C	11.5	8.4	2430		--	--	--	--	--	--	--	--	--	--	--
1105	5000	4.20			0.0 A		--	--	--	--	--	--	--	--	--	--	--

MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	TEMP EC	DO G.H.	F-PH L-PH	DISCH MBAS	DEPTH TURB	T+L CHLOR	D+G COLOR	SET S	ROD SUS S	COD V SUS S	CYANIDE PHENOLS	TOC DOC	IODIDE T OODR	BROMIDE SULFITE	T SULF D SULF	CC EXT CA EXT
									ML/L MG/L								
F3 1430.00 KLAMATH R NR SEIAD VLY F05C2 CONTINUED																	
09/02/64	5050	17.8C	9.7	8.4	1500		--	--	--	--	--	--	--	--	--	--	--
1130	5000		3.31		0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/04/65	5050	54.0F	10.0	8.0	4810 E		--	--	--	--	--	--	--	--	--	--	--
1210	5000		6.61		0.0 A		--	--	--	--	--	--	--	--	--	--	--
09/15/65	5050	64.0F	9.8	8.2	2500		--	--	--	--	--	--	--	--	--	--	--
1240	5000		4.80		0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/02/66	5050	15.0C	10.7	8.2	3540		--	--	--	--	--	--	--	--	--	--	--
1515	5000				0.0 A		--	--	--	--	--	--	--	--	--	--	--
09/12/66	5050	16.7C	10.0	8.2	1480		--	--	--	--	--	--	--	--	--	--	--
1140	5000				0.0 A		--	--	--	--	--	--	--	--	--	--	--
05/02/67	5050	12.0C	12.4	8.2	5020		--	--	--	--	--	--	--	--	--	--	--
1225	5000				0.0 A		--	--	--	--	--	--	--	--	--	--	--
12/06/82	5050	6.0C	11.9	7.5			--	--	--	16 5	4	--	--	--	--	--	--
1335	5050		170		--		--	--	--			--	--	--	--	--	--
01/10/83	5050	3.5C	13.2	7.8			--	--	--	8 5	1	--	--	--	--	--	--
1435	5050		198		--		--	--	--			--	--	--	--	--	--
03/22/83	5050	8.0C	11.3	7.7			--	--	--	36 5	3	--	--	--	--	--	--
1440	5050		193		--		--	--	--			--	--	--	--	--	--
05/17/83	5050	13.5C	11.5	8.0			--	--	--	7 5	1	--	--	--	--	--	--
1350	5050		171		--		--	--	--			--	--	--	--	--	--
09/12/83	5050	20.5C	10.2	8.2			--	--	--	0 5	0	--	--	--	--	--	--
1240	5050		223		--		--	--	--			--	--	--	--	--	--
02/22/84	5050	6.0C	12.8	7.8			--	--	--	14 5	4	--	--	--	--	--	--
1450	5050		243		--		--	--	--			--	--	--	--	--	--
05/18/84	5050	13.5C	10.3	7.6			--	--	--	11 5	2	--	--	--	--	--	--
1045	5050		147		--		--	--	--			--	--	--	--	--	--
08/30/84	5050	20.5C	9.2	8.1			--	--	--	5 5	2	--	--	--	--	--	--
1020	5050		220		--		--	--	--			--	--	--	--	--	--
12/17/84	5050	4.5C	14.0	7.5			--	--	--	5 5	1	--	--	--	--	--	--
1545	5050		213		--		--	--	--			--	--	--	--	--	--
05/14/85	5050	59.0F	10.0	8.2			--	--	--	1.5 8	--	--	3.7	--	--	--	--
1910	5050		170		--		--	--	--	4 5	2	--	--	--	--	--	--

MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	TEMP FC	DO G.H.	F-PH L-PH	DISCH MBAS	DEPTH TURB	T+L CHLOR	SET 5		ROD SUS S	COD V SUS S	CYANIDE PHENOLS	TOC DOC	IODIDE T ODOOR	BROMIDE SULFITE	T SULF D SULF	CC EXT CA EXT
								O+G COLOR	ML/L MG/L								
		F3	1430.00														
09/02/64	5050	17.8C	9.7	8.4	1500		--	--	--	--	--	--	--	--	--	--	--
1130	5000		3.31		0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/04/65	5050	54.0F	10.0	8.0	4810	E	--	--	--	--	--	--	--	--	--	--	--
1213	5000		6.61		0.0	A	--	--	--	--	--	--	--	--	--	--	--
09/15/65	5050	64.0F	9.8	8.2	2500		--	--	--	--	--	--	--	--	--	--	--
1240	5000		4.80		0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/02/66	5050	15.0C	10.7	8.2	3540		--	--	--	--	--	--	--	--	--	--	--
1515	5000				0.0	A	--	--	--	--	--	--	--	--	--	--	--
09/12/66	5050	16.7C	10.0	8.2	1480		--	--	--	--	--	--	--	--	--	--	--
1140	5000				0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/02/67	5050	12.0C	12.4	8.2	5020		--	--	--	--	--	--	--	--	--	--	--
1225	5000				0.0	A	--	--	--	--	--	--	--	--	--	--	--
12/06/82	5050	6.0C	11.9	7.5			--	--	--	--	--	--	--	--	--	--	--
1335	5050		170		--		--	--	--	16	5	4	--	--	--	--	--
01/10/83	5050	3.5C	13.2	7.8			--	--	--	--	--	--	--	--	--	--	--
1435	5050		198		--		--	--	--	8	5	1	--	--	--	--	--
03/22/83	5050	8.0C	11.3	7.7			--	--	--	--	--	--	--	--	--	--	--
1440	5050		193		--		--	--	--	36	5	3	--	--	--	--	--
05/17/83	5050	13.5C	11.5	8.0			--	--	--	--	--	--	--	--	--	--	--
1350	5050		171		--		--	--	--	7	5	1	--	--	--	--	--
09/12/83	5050	20.5C	10.2	8.2			--	--	--	--	--	--	--	--	--	--	--
1240	5050		223		--		--	--	--	0	5	0	--	--	--	--	--
02/22/84	5050	6.0C	12.8	7.8			--	--	--	--	--	--	--	--	--	--	--
1450	5050		243		--		--	--	--	14	5	4	--	--	--	--	--
05/10/84	5050	13.5C	10.3	7.6			--	--	--	--	--	--	--	--	--	--	--
1045	5050		147		--		--	--	--	11	5	2	--	--	--	--	--
08/30/84	5050	20.5C	9.2	8.1			--	--	--	--	--	--	--	--	--	--	--
1020	5050		220		--		--	--	--	5	5	2	--	--	--	--	--
12/17/84	5050	4.5C	14.0	7.5			--	--	--	--	--	--	--	--	--	--	--
1545	5050		213		--		--	--	--	5	5	1	--	--	--	--	--
05/14/85	5050	59.0F	10.0	8.2			--	--	--	1.5	8	--	3.7	--	--	--	--
1910	5050		170		--		--	--	--	4	5	2	--	--	--	--	--

MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	TEMP FC	DD G.H.	F-PH L-PH	DISCH NRAS	DEPTH TURR	T+L CHLOR	Q+G COLOR	SET S ML/L MG/L	ROD SUS S	COO V SUS S	CYANIDE PHENOLS	TOC OOC	IODIDE T ODO	BROMIDE SULFITE	T SULF D SULF	CC EXT CA EXT
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1450.00		KLAMATH R A SARAH TOTTEN CAMPGROUN										F05C3					
04/25/83	5050	9.5C	11.2	7.9	--	--	--	--	--	--	--	--	--	--	--	--	--
1600	5050				--	--	--	--	--	12	5	3	--	--	--	--	--
08/30/84	5050	21.0C	9.3	8.2	--	--	--	--	--	--	--	--	--	--	--	--	--
1210	5050	215			--	--	--	--	--	5	5	3	--	--	--	--	--
02/26/85	5050	41.0F	12.1	8.2	--	--	--	--	--	--	--	--	--	--	--	--	--
1225	5050	205			--	--	--	--	--	6	5	4	--	--	--	--	--
05/14/85	5050	59.0F	9.3	8.2	--	--	--	--	--	--	--	--	--	--	--	--	--
1845	5050	172			--	--	--	--	--	5	5	2	--	--	--	--	--
F3 2250.00		DILLON C NR SOMESBAR										F05C1					
08/29/84	5050	62.0F	9.4	7.7	--	--	--	--	--	--	--	--	--	--	--	--	--
0740	5050	116			--	--	--	--	--	2	5	1	--	--	--	--	--
05/15/85	5050	47.0F	11.1	7.6	--	--	--	--	--	--	--	--	0.7	--	--	--	--
0405	5050	75			--	--	--	--	--	1	5	1	--	--	--	--	--
F3 2315.00		CLEAR C NR HAPPY CAMP										F05C1					
08/30/84	5050	17.0C	9.7	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--
0815	5050	122			--	--	--	--	--	1	5	1	--	--	--	--	--
05/14/85	5050	52.0F	10.1	7.2	--	--	--	--	--	--	--	--	--	--	--	--	--
2030	5050	82			--	--	--	--	--	1	5	1	--	--	--	--	--
F3 2329.00		INDIAN C AT MOUTH										F05C2					
08/30/84	5050	17.5C	9.4	7.6	--	--	--	--	--	--	--	--	--	--	--	--	--
0725	5050	165			--	--	--	--	--	2	5	1	--	--	--	--	--
02/26/85	5050	40.5F	13.0	8.1	--	--	--	--	--	--	--	--	--	--	--	--	--
1335	5050	112			--	--	--	--	--	2	5	2	--	--	--	--	--
05/14/85	5050	54.0F	10.0	7.8	--	--	--	--	--	--	--	--	0.8	--	--	--	--
2000	5050	102			--	--	--	--	--	1	5	1	--	--	--	--	--
F3 4100.00		SALMON R A SOMESBAR										F05R1					
05/08/81	5050	11.1C	10.8	7.3	2170	--	--	--	--	--	--	--	--	--	--	--	--
1615	5000	4.97			0.0 A	--	--	--	--	--	--	--	--	--	--	--	--
09/06/81	5050	21.1C	9.6	8.1	166	--	--	--	--	--	--	--	--	--	--	--	--
1430	5000	3.15			0.0 A	--	--	--	--	--	--	--	--	--	--	--	--
09/03/83	5050	20.6C	9.7	8.2	240	--	--	--	--	--	--	--	--	--	--	--	--
1210	5000	3.20			0.0 A	--	--	--	--	--	--	--	--	--	--	--	--

MISCELLANEOUS ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	TEMP EC	DO G.H.	F-PH L-PH	DISCH M ³ /S	DEPTH TURR	T+L CHLOR	D+G COLOR	SET S	RDO SUS S	COD V SUS S	CYANIDE PHENOLS	TOC DOC	IODIDE T ODR	BROMIDE SULFITE	T SULF D SULF	CC EXT CA EXT
									ML/L MG/L								
F3 4100.00		SALMON R A SOMESRAR								F05R1 CONTINUED							
05/11/64 1315	5050 5000	13.9C	11.3	7.4	2380 0.0	A	--	--	--	--	--	--	--	--	--	--	--
09/14/64 1205	5050 5000	17.2C	10.0 2.88	8.2	242 0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/10/65 1345	5050 5000	53.0F	10.2	7.4	2800 0.0	E A	--	--	--	--	--	--	--	--	--	--	--
09/20/65 1400	5050 5000	64.0F	9.6	8.2	174 0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/19/66 1030	5050 5000	11.1C	11.0 5.67	7.4	2500 0.0	A	--	--	--	--	--	--	--	--	--	--	--
05/09/67 1255	5050 5000	10.3C	11.8 6.70	7.3	4850 0.0	A	--	--	--	--	--	--	--	--	--	--	--
08/29/84 0900	5050 5050	66.0F	9.5 139	7.6	--	--	--	--	--	3 5	1	--	--	--	--	--	--
09/10/84 1025	5050 5050	19.0C	10.0 140 1.86	7.6	--	--	--	--	--	0.5 B	--	--	--	--	--	--	--
10/22/84 1205	5050 5050	10.5C	11.5 129 2.36	7.6	--	--	--	--	--	0.8 B	--	--	--	--	--	--	--
04/15/85 1440	5050 5050	11.0C	11.6 6.21	7.3	--	--	--	--	--	0.6 B 6 5	-- 4	--	--	--	--	--	--
05/15/85 0535	5050 5050	50.0F	10.8 78	7.3	--	--	--	--	--	1.1 B 1 5	-- 1	--	1.2	--	--	--	--
02/03/86 1130	5050 5050	7.0C	12.6 6.65	7.5	--	--	--	--	--	1.3 B	--	--	--	--	--	--	--

APPENDIX D

Minor Element Analysis of Surface Water

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
		F3	1220.01									
			8780									
05/11/64	5050			12.8C								
1150	5000			7.8	0.00	D	0.00	D	0.00	D	0.00	D
									0.0045	D		
09/14/64	5050		1910	18.3C					0.00	D		
1300	5000			8.0	0.00	D	0.00	D	0.0065	D	0.0	D
									0.00	D		
05/10/65	5050		9500 E	56.0F					0.00	D		
1310	5000			7.8	0.00	D	0.00	D	0.043	D	0.0	D
									0.00	D		
09/20/65	5050		1530 E	62.0F					0.00	D		
1310	5000			8.1	0.00	D	0.00	D	--		0.00	D
									0.00	D		
05/19/66	5050		9730	13.9C					0.00	D		
0945	5000			7.0	0.00	D	0.00	D	0.021	D	0.034	D
									0.010	D		
05/08/67	5050		19400	11.4C					0.00	D		
1210	5000			7.6	0.00	D	0.00	D	0.054	D	0.00	D
									0.034	D		
09/11/67	5050		2000 E	19.4C					0.00	D		
0945	5000			8.0	--		0.00	D	0.026	D	0.00	D
									0.00	D		
05/06/68	5050		5270	12.8C					0.00	D		
1045	5000			7.7	--		0.00	D	--		0.00	D
									0.023	D		
09/09/68	5050		1580	20.6C					0.00	D		
1210	5000			8.2	--		0.00	D	0.057	D	0.00	D
									0.00	D		
09/08/69	5050		1370	21.7C					0.00	D		
1245	5000			8.1	--		0.00	D	0.018	D	0.00	D
									0.00	D		
05/11/70	5050		6610	9.0C					0.00	D		
1230	5000			7.6	--		0.00	D	0.0074	D	0.00	D
									0.00	D		
09/14/70	5050		1830	16.0C					0.00	D		
1150	5000			8.0	--		0.00	D	0.0023	D	0.00	D
									0.00	D		
05/03/71	5050		19500	10.6C					0.00	D		
1100	5050			7.4	0.00	D	0.1	D	--		0.0000	T
							0.00	D	--		0.00	D
05/03/71	5050		19500	10.6C					0.00	D		
1101	5000			7.4	--		0.00	D	0.026	D	0.00	D
									0.00	D		
09/13/71	5050		2180	19.0C					0.00	D		
1125	5000			7.9	--		0.00	D	0.019	D	0.00	D
									0.00	D		
05/01/72	5050		10100	11.5C					0.00	T		
1100	5050		140	7.6	--		0.00	T	1.2	T	0.01	T
									0.03	T		

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1220.01			KLAMATH R A ORLEANS					F05A2 CONTINUED				
05/01/72	5050		10100	11.5C		--	0.00	D	0.00	D	--	--
1101	5000		140	7.6	--	0.00	D	0.022	D	0.00	D	0.00
08/04/72	5050		192	73.0F	--	--	--	0.00	T	0.00	T	--
0950	5050			8.0	--	0.00	T	1.80	T	0.25	T	0.08
04/01/74	5050			8.0C	--	--	--	0.08	T	0.00	T	--
1145	5050			7.7	--	0.01	T	30.	T	0.64	T	0.05
04/14/75	5050			9.0C	--	--	--	0.00	T	0.00	T	--
1115	5050			7.6	--	0.00	T	2.6	T	0.04	T	0.00
04/05/76	5050			11.0C	--	--	--	0.00	T	0.00	T	--
1145	5050			8.0	--	0.00	T	0.07	T	0.01	T	0.02
02/06/84	5050		175	7.0C		0.	D	0.00	D	0.00	D	0.000
1200	5050			7.5	0.00	D	0.00	D	0.04	D	0.01	D
05/01/84	5050		128	11.0C		0.	D	0.00	D	0.00	D	0.000
1215	5050			7.6	0.00	D	0.00	D	0.06	D	0.01	D
05/18/84	5050		120	13.2C		0.	T	0.00	T	0.05	T	--
0830	5050			7.7	0.00	T	0.00	T	0.55	T	0.02	T
08/29/84	5050		196	21.0C	--	--	--	0.00	T	0.00	T	--
0925	5050			8.1	--	--	--	0.13	T	0.02	T	0.01
10/03/84	5050		231	16.0C	--	--	--	0.00	T	0.00	T	--
1005	5050			8.0	--	--	--	0.12	T	0.08	T	0.02
02/27/85	5050		151	43.0F	--	--	--	0.00	T	0.00	T	--
1000	5050			7.6	--	--	--	0.23	T	0.01	T	0.01
05/15/85	5050		135	54.0F	--	--	--	0.00	T	0.00	T	--
0605	5050			7.7	--	--	--	0.12	T	0.01	T	0.00
F3 1300.00			KLAMATH R A SOMESBAR					F05A2				
05/21/52	5050		23200	13.0C		--	--	0.00	D	0.00	D	--
0830	5000			7.7	0.00	D	--	0.00	D	0.00	D	0.00
10/08/52	5050		3620	61.0F		--	--	0.00	D	0.00	D	--
0900	5000			7.7	0.00	D	--	0.00	D	0.00	D	0.00
05/06/53	5050		17200	56.0F		--	--	0.00	D	0.00	D	--
0820	5000			7.2	0.00	D	--	0.00	D	0.00	D	0.00
09/16/53	5050		4390	70.0F		--	--	0.00	D	0.00	D	--
0900	5000			7.5	0.00	D	--	0.01	D	0.00	D	0.00

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	PER LITER COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1300.00			KLAMATH R A SOMESBAR				F05A2 CONTINUED					
05/05/54 1430	5050 5000		14800	62.0F 7.7	0.00 D	--	0.00 D	0.00 D 0.04 D	0.00 D 0.00 D	--	0.02 D	
09/15/54 0830	5050 5000		4350	64.0F 7.4	0.01 D	--	0.00 D	0.01 D 0.04 D	0.00 D 0.00 D	--	0.01 D	
05/09/55 2000	5050 5000		9860	62.0F 6.8	0.00 D	--	0.00 D	0.00 D 0.01 D	0.005 D 0.00 D	--	0.00 D	
06/08/55 0830	5050 5000		7050	65.0F 7.5	0.00 D	--	0.00 D	0.00 D 0.00 D	0.00 D 0.00 D	--	0.00 D	
09/14/55 0905	5050 5000		1670	62.0F	0.00 D	--	0.00 D	0.00 D 0.04 D	0.00 D 0.00 D	--	0.00 D	
05/09/56 1300	5050 5000		19800	56.0F	0.01 D	--	0.00 D	0.01 D 0.03 D	0.00 D 0.00 D	--	0.02 D	
09/12/56 1630	5050 5000		2530	69.0F 7.1	0.00 D	--	0.00 D	0.01 D 0.00 D	0.00 D 0.00 D	--	0.02 D	
05/10/57 1500	5050 5000		10800	56.0F 6.9	0.00 D	--	0.00 D	0.03 D 0.04 D	0.00 D 0.00 D	--	0.02 D	
09/12/57 1230	5050 5000		2830	72.0F 7.9	0.00 D	--	0.00 D	0.00 D 0.03 D	0.00 D 0.00 D	--	0.00 D	
05/07/58 1245	5050 5000		19100	59.0F 8.0	0.00 D	--	0.00 D	0.00 D 0.05 D	0.00 D 0.00 D	--	0.00 D	
09/10/58 1215	5050 5000		4400	70.0F 8.6	0.00 D	--	0.00 D	0.00 D 0.01 D	0.00 D 0.00 D	--	0.01 D	
05/06/59 1030	5050 5000			11.7C 7.4	0.00 D	--	0.00 D	0.00 D 0.06 D	0.00 D 0.00 D	--	0.00 D	
09/10/59 0850	5050 5000			22.8C 7.7	0.0 D	--	0.0 D	0.0 D 0.04 D	0.0 D 0.0 D	--	0.0 D	
05/02/60 1730	5050 5000			13.3C	0.00 D	--	0.00 D	0.01 D 0.01 D	0.00 D 0.00 D	--	0.00 D	
09/15/60 1405	5050 5000		1630	20.6C 8.1	0.00 D	--	0.00 D	0.01 D 0.01 D	0.00 D 0.00 D	--	0.03 D	
05/08/61 1645	5050 5000		8700	12.2C 7.9	0.00 D	--	0.00 D	0.00 D 0.02 D	0.00 D 0.00 D	--	0.00 D	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	CONSTITUENTS ARSENIC BARIUM CADMIUM				IN MILLIGRAMS PER LITER CHROM (ALL) CHROM (HEX)		COPPER IRON		LEAD MANGANESE		MERCURY SELENIUM		SILVER ZINC		REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1300.00			KLAMATH R A SOMESBAR										F05A2 CONTINUED						
09/06/61	5050		1360	21.1C				--		--	0.01	D	0.00	D	--		--		
1330	5000			8.1	0.00	D		--		--	0.06	T	0.00	D	--		0.00	D	
05/08/62	5050		10200	12.8C				--		0.00	D	0.00	D	0.00	D	--		--	
1135	5000			7.5	0.00	D	0.00	D		--	0.013	D	0.00	D	--		0.0	D	
09/04/62	5050		1850	22.8C				--		0.00	D	0.00	D	0.00	D	--		--	
1440	5000			8.2	0.00	D	0.00	D		--	0.012	D	0.00	D	--		0.0	D	
05/06/63	5050		26500	10.0C				--		0.00	D	0.00	D	0.00	D	--		0.00	D
1145	5000			7.5	0.00	D	0.00	D		--	0.019	D	0.00	D	--		0.00	D	
09/03/63	5050		2240	21.7C				--		0.00	D	0.00	D	0.00	D	--		--	
1250	5000			8.0	0.00	D	0.00	D		--	0.0093	D	0.00	D	--		0.0	D	
05/11/64	5050		8780	13.3C				--		0.00	D	0.016	D	0.00	D	--		--	
1245	5000			8.1	0.00	D	0.00	D		--	0.0045	D	0.00	D	--		0.00	D	
F3 1302.00			KLAMATH R AB SALMON RIVER										F05A2						
08/29/84	5050			68.0F				--		--	0.01	T	0.00	T	--		--		
0845	5050		204	7.9	--			--		--	0.22	T	0.04	T	--		0.03	T	
F3 1305.00																			
10/12/50	5050				--			--		--	--		--		--		--		
1150					--			--		--	--		--		--		--		
F3 1327.00			KLAMATH R AB TI CREEK										F05C1						
08/14/85	5050			21.0C				--		--	0.00	T	0.00	T	--		--		
0805	5050		196	8.2	--			--		--	0.29	T	0.04	T	--		0.02	T	
F3 1336.00			KLAMATH R AB PAK FLAT CREEK										F05C1						
05/18/84	5050			13.5C				--		--	0.05	T	0.00	T	--		--		
0820	5050		142	7.7	--			--		--	0.70	T	0.02	T	--		0.01	T	
08/30/84	5050			20.5C				--		--	0.00	T	0.00	T	--		--		
0745	5050		210	7.9	--			--		--	0.19	T	0.03	T	--		0.01	T	
05/14/85	5050			58.0F				--		--	0.00	T	0.00	T	--		--		
2015	5050		154	8.3	--			--		--	0.18	T	0.01	T	--		0.00	T	
08/14/85	5050			22.0C				--		--	0.00	T	0.00	T	--		--		
1040	5050		202	8.3	--			--		--	0.24	T	0.05	T	--		0.01	T	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	CONSTITUENTS BARIUM CADMIUM	IN MILLIGRAMS CHROM (ALL) CHROM (HEX)	PER LITER COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1395.00			KLAMATH R AB HAPPY CAMP					F05C2				
05/18/84	5050			14.5C		--	--	0.05 T	0.01 T	--	--	
1015	5050		153	7.7	--	--	--	0.51 T	0.02 T	--	0.01 T	
08/30/84	5050			20.5C		--	--	0.00 T	0.00 T	--	--	
0900	5050		215	8.0	--	--	--	0.19 T	0.04 T	--	0.01 T	
F3 1430.00			KLAMATH R NR SEIAD VLY					F05C2				
05/13/59	5050			16.1C		--	0.00 D	0.00 D	0.00 D	--	--	
0900	5000				0.00 D	--	--	0.02 D	0.00 D	--	0.00 D	
09/08/59	5050			20.0C		--	0.0 D	0.0 D	0.0 D	--	--	
1110	5000			8.0	0.0 D	--	--	0.03 D	0.0 D	--	0.0 D	
05/04/60	5050			11.7C		--	0.00 D	0.00 D	0.00 D	--	--	
1000	5000			7.7	0.00 D	--	--	0.06 D	0.00 D	--	0.00 D	
09/06/60	5050			21.1C		--	0.00 D	0.00 D	0.00 D	--	--	
1220	5000			8.1	0.00 D	--	--	0.02 D	0.00 D	--	0.00 D	
05/09/61	5050		3420	14.4C		--	0.00 D	0.00 D	0.00 D	--	--	
1310	5000			8.3	0.00 D	--	--	0.03 D	0.00 D	--	0.00 D	
09/12/61	5050		1860	18.3C		--	--	0.01 D	0.00 D	--	--	
0935	5000			7.9	0.02 D	--	--	0.18 T	0.06 D	--	0.00 D	
05/16/62	5050		3390	13.9C		--	0.00 D	0.00 D	0.012 D	--	--	
1335	5000			8.3	0.01 D	0.00 D	--	0.015 D	0.00 D	--	0.0 D	
09/13/62	5050		1430	19.4C		--	0.00 D	0.00 D	0.00 D	--	--	
1135	5000			8.3	0.01 D	0.00 D	--	0.010 D	0.00 D	--	0.0 D	
05/02/63	5050		6300	9.4C		--	0.00 D	0.00 D	0.00 D	--	0.00 D	
1130	5000			7.7	0.00 D	0.00 D	--	0.017 D	0.00 D	--	0.00 D	
09/11/63	5050		1590	20.0C		--	0.00 D	0.00 D	0.00 D	--	--	
1045	5000			8.0	0.00 D	0.00 D	--	0.017 D	0.00 D	--	0.0 D	
05/06/64	5050		2430	10.0C		--	0.00	0.0019 D	0.00 D	--	--	
1105	5000			8.4	0.00 D	0.00 D	--	0.010 D	0.00 D	--	0.00 D	
09/02/64	5050		1500	17.8C		--	0.00 D	0.00 D	0.00 D	--	--	
1130	5000			8.4	0.01 D	0.00 D	--	0.0044 D	0.00 D	--	0.0 D	
05/04/65	5050		4810 F	54.0F		--	0.00 D	0.00 D	0.00 D	--	--	
1210	5000			8.0	0.00 D	0.00 D	--	0.083 D	0.00 D	--	0.0 D	
09/15/65	5050		2500	64.0F		--	0.00 D	0.00 D	0.00 D	--	--	
1240	5000			8.2	0.01 D	0.00 D	--	0.024 D	0.00 D	--	0.00 D	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC		BARIUM CADMIUM		CHROM (ALL) CHROM (HEX)		COPPER IRON		LEAD MANGANESE		MERCURY SELENIUM		SILVER ZINC		REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1430.00			KLANATH R NR SEIAD VLY							F05C2 CONTINUED									
05/02/66	5050		3540	15.0C			--		0.00	D	0.00	D	0.00	D	--		--		
1515	5000			8.2	0.00	D	0.00	D	--	D	0.0083	D	0.00	D	--		0.0097	D	
09/12/66	5050		1480	16.7C			--		0.00	D	0.00	D	0.00	D	--		--		
1140	5000			8.2	0.01	D	0.00	D	--	D	0.033	D	0.00	D	--		0.00	D	
05/02/67	5050		5020	12.0C			--		0.00	D	0.00	D	0.00	D	--		--		
1225	5000			8.2	0.00	D	0.00	D	--	D	0.071	D	0.00	D	--		0.00	D	
09/06/67	5050		1550	20.8C			--		0.00	D	0.00	D	0.00	D	--		--		
1025	5000			8.2	--		0.00	D	--	D	0.027	D	0.034	D	--		0.00	D	
05/06/68	5050		2410	13.3C			--		0.00	D	0.00	D	0.00	D	--		--		
1450	5000			8.4	--		0.00	D	--	D	--	D	0.023	D	--		0.00	D	
09/04/68	5050		1190	21.7C			--		0.00	D	0.00	D	0.00	D	--		--		
1530	5000			8.4	--		0.00	D	--	D	0.0071	D	0.00	D	--		0.00	D	
05/12/69	5050		9400	14.4C			--		0.00	D	0.00	D	0.00	D	--		--		
1345	5000			8.0	0.00	D	0.00	D	--	D	0.083	D	0.00	D	--		0.00	D	
09/16/69	5050		1530	16.7C			--		0.00	D	0.00	D	0.00	D	--		--		
0805	5000			7.8	0.00	D	0.00	D	--	D	0.0074	D	0.00	D	--		0.00	D	
05/12/70	5050		3130	9.4C			--		0.00	D	0.00	D	0.00	D	--		--		
1630	5000			8.3	--		0.00	D	--	D	0.051	D	0.00	D	--		0.00	D	
08/03/70	5050		1280	22.0C			--		0.00	D	0.00	D	0.00	D	--		--		
1325	5000			8.4	--		0.00	D	--	D	0.046	D	0.00	D	--		0.012	D	
05/10/71	5050		12700	13.0C			--		0.1	D	--		0.00	D	0.0000	Y	--		
1450	5050			7.8	0.00	D	0.00	D	--	D	--		--	D	0.00	D	--		
05/10/71	5050		12700	13.0C			--		0.00	D	0.00	D	0.00	D	--		--		
1451	5000			7.8	--		0.00	D	--	D	0.037	D	0.00	D	--		0.00	D	
09/21/71	5050		2080	18.0C			--		0.00	D	0.00	D	0.00	D	--		--		
1450	5000			8.2	--		0.00	D	--	D	0.051	D	0.00	D	--		0.00	D	
09/22/71	5050			14.8C			--		--		0.00	D	0.00	D	--		--		
0800	5050		210	7.5	0.00	D	0.00	D	--	D	0.01	D	0.00	D	0.01	D	0.00	D	
05/17/72	5050		5500	13.0C			--		0.00	D	0.00	D	0.00	D	--		--		
0930	5000		171	7.9	--		0.00	D	--	D	0.022	D	0.00	D	--		0.00	D	
06/16/72	5050		2420	17.5C			--		--		0.01	D	0.01	D	--		--		
0830	5050		200	7.9	0.00	D	0.00	D	--	D	0.02	D	0.00	D	0.00	D	0.01	D	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	DEPTH	DISCH EC	TEMP PH	ARSENIC	CONSTITUENTS IN MILLIGRAMS PER LITER		CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1430.00					KLAMATH R NR SEIAD VLY				F05C2 CONTINUED				
06/16/72	5050		2420	17.5C		--	--	--	0.01 T	0.01 T	--	--	
0831	5050		200	7.9	--	0.00 T	--	--	0.59 T	0.03 T	--	0.01 T	
03/13/73	5050			7.0C		--	--	--	0.00 T	0.01 T	--	--	
1545	5050			7.9	0.00 T	0.00 T	--	--	0.35 T	0.02 T	--	0.03 T	
05/07/74	5050			14.0C		--	--	--	0.01 T	0.01 T	--	--	
1320	5050			8.4	--	0.00 T	--	--	2.2 T	0.06 T	--	0.01 T	
03/18/75	5050			3.0C		--	--	--	0.02 T	0.00 T	--	--	
1505	5050		172	7.7	--	0.00 T	--	--	13. T	0.45 T	--	0.03 T	
05/18/84	5050			13.5C		0. T	0.00 T	0.00 T	0.05 T	0.01 T	--	--	
1045	5050		147	7.6	0.01 T	0.00 T	--	--	0.55 T	0.02 T	0.00 T	0.01 T	
08/30/84	5050			20.5C		--	--	--	0.00 T	0.00 T	--	--	
1020	5050		220	8.1	--	--	--	--	0.19 T	0.03 T	--	0.01 T	
05/14/85	5050			59.0F		--	--	--	0.00 T	0.00 T	--	--	
1910	5050		170	8.2	--	--	--	--	0.15 T	0.02 T	--	0.01 T	
08/14/85	5050			21.5C		--	--	--	0.00 T	0.01 T	--	--	
0835	5050		203	7.9	--	--	--	--	0.68 T	0.04 T	--	0.02 T	
F3 1435.00					KLAMATH R AT HWY 96 AB SEIAD VLY				F05C3				
10/12/50	5050					--	--	--	--	--	--	--	
0840	5000				--	--	--	--	0.0 D	--	--	--	
10/02/53	5050					--	--	--	--	--	--	--	
1000	5000				--	--	--	--	0.03 D	--	--	--	
F3 1460.00					KLAMATH R A SARAH TOTTON CAMPGROUN				F05C3				
08/26/81	5050			21.0C		--	--	--	0.00 D	--	--	--	
1110	5050		205	8.2	0.01 D	--	--	--	0.03 D	0.05 T	--	0.00 D	
02/25/82	5050			6.0C		0. T	0.02 T	0.02 T	0.02 T	0.00 T	0.000 T	--	
1140	5050		175	7.6	0.00 T	0.00 T	--	--	5.5 T	0.12 T	0.00 T	--	
02/26/85	5050			41.0F		--	--	--	0.00 T	0.00 T	--	--	
1225	5050		205	8.2	--	--	--	--	0.46 T	0.02 T	--	0.01 T	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ARSENIC	BARIUM CADMIUM	CHROM (ALL) CHROM (HEX)	COPPER IRON	LEAD MANGANESE	MERCURY SELENIUM	SILVER ZINC	REM
			F3 2270.00			SWILLUP C NR SOMESBAR		F05C1				
10/12/50	5050			60.0F	--	--	--	--	--	--	--	
1045	5000				--	--	--	0.01 D	--	--	--	
			F3 2303.00			INDIAN C BL MILLPOND		F05C2				
08/04/54	5050		35 E	68.0F	--	--	--	--	--	--	--	
2000	5000				--	--	--	2.4 D	--	--	--	
			F3 2329.00			INDIAN C AT MOUTH		F05C2				
08/04/54	5050		35 E	69.0F	--	--	--	--	--	--	--	
2030	5000				--	--	--	0.4 D	--	--	--	
05/18/84	5050		150 E	8.5C	--	--	--	0.06 T	0.00 T	--	--	
0750	5050		102	7.9	--	--	--	0.44 T	0.01 T	--	0.01 T	
08/30/84	5050			17.5C	--	--	--	0.00 T	0.00 T	--	--	
0725	5050		165	7.6	--	--	--	0.57 T	0.01 T	--	0.01 T	
02/26/85	5050			40.5F	--	--	--	0.00 T	0.00 T	--	--	
1335	5050		112	8.1	--	--	--	0.47 T	0.01 T	--	0.00 T	
05/14/85	5050			54.0F	--	--	--	0.00 T	0.00 T	--	--	
2000	5050		102	7.8	--	--	--	0.23 T	0.01 T	--	0.00 T	
			F3 2330.00			INDIAN C AT HAPPY CAMP		F05C2				
10/12/50	5050				--	--	--	--	--	--	--	
0945	5000				--	--	--	0.01 D	--	--	--	
			F3 4100.00			SALMON R A SOMESBAR		F05B1				
05/06/59	5050			10.6C		--	0.00 D	0.00 D	0.00 D	--	--	
0945	5000			7.4	0.00 D	--	--	0.01 D	0.00 D	--	0.00 D	
06/03/59	5050			13.3C		--	0.00 D	0.00 D	0.00 D	--	--	
0750	5000			7.5	0.00 D	--	--	0.01 D	0.00 D	--	0.00 D	
09/10/59	5050			21.1C		--	0.0 D	0.0 D	0.0 D	--	--	
0945	5000			7.5	0.0 D	--	--	0.01 D	0.0 D	--	0.0 D	
05/02/60	5050			11.7C		--	0.00 D	0.01 D	0.00 D	--	--	
1650	5000			7.7	0.00 D	--	--	0.00 D	0.00 D	--	0.00 D	
09/15/60	5050		157	20.0C		--	0.00 D	0.01 D	0.00 D	--	--	
1505	5000			8.1	0.00 D	--	--	0.00 D	0.00 D	--	0.02 D	
05/08/61	5050		2170	11.1C		--	0.00 D	0.00 D	0.00 D	--	--	
1615	5000			7.3	0.00 D	--	--	0.01 D	0.00 D	--	0.00 D	

MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE			SAMP		DEPTH	DISCH		TEMP	PH		CONSTITUENTS				IN MILLIGRAMS				PER LITER		LEAD				MERCURY				SILVER				REH
TIME	LAB			EC					ARSENIC	BARIUM	CADMIUM	CHROM (ALL)	CHROM (HEX)			COPPER	IRON	MANGANESE	SELENIUM	ZINC													
F3			4100.00		SALMON R A SOMESBAR										F05B1 CONTINUED																		
09/06/61	5050			166		21.1C							--		--		0.00	D	0.00	D	--		--		--		0.00	D					
1430	5000					8.1		0.00	D	--	--	--	--	--	--		0.00	T	0.00	D	--					0.00	D						
09/03/63	5050			240		20.6C							--		--		--		--		--		--		--		--						
1210	5000					8.2		0.01	D	--	--	--	--	--	--		--		--		--		--		--		--						
05/11/64	5050			2380		13.9C							--		--		--		--		--		--		--		--						
1315	5000					7.4		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
09/14/64	5050			242		17.2C							--		--		--		--		--		--		--		--						
1205	5000					8.2		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
05/10/65	5050			2800 E		53.0F							--		--		--		--		--		--		--		--						
1345	5000					7.4		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
09/20/65	5050			174		64.0F							--		--		--		--		--		--		--		--						
1400	5000					8.2		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
05/19/66	5050			2500		11.1C							--		--		--		--		--		--		--		--						
1030	5000					7.4		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
05/08/67	5050			4850		10.3C							--		--		--		--		--		--		--		--						
1255	5000					7.3		0.00	D	--	--	--	--	--	--		--		--		--		--		--		--						
06/21/71	5050			3360		13.0C						0.0	D	--		--		0.00	D	0.0000	T	--		--		--							
1150	5050					7.2		0.00	D			0.00	D	--	--		--		--		0.00	D	--		--		--						
08/29/84	5050					66.0F							--		--		0.00	T	0.00	T	--		--		--		--						
0903	5050			139		7.6		--				--	--	--	--		0.06	T	0.00	T	--		0.00	T	--		0.00	T					
F3			4255.00		MILL C AT MOUTH										F05C3																		
10/12/50	5050												--		--		--		--		--		--		--		--						
1430	5000							--				--	--	--	--		0.01	D	--		--		--		--		--						

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	DEPTH	DISCH EC	TEMP PH	CONSTITUENTS IN MILLIGRAMS PER LITER										LITHIUM					NICKEL					TITANIUM					PFM																		
					ALUMINIUM					ANTIMONY RERYLLIUM					RISMUTH CORALT					GALLIUM GERMANIUM					MOLYBDENUM						STRONTIUM					VANADIUM												
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *																	
F3			1220.01	KLAMATH R A ORLEANS										F0542																																		
05/11/64	5050		8780	12.80																																												
1150	5000			7.8	0.00	D		0.000	D			0.000	D	0.00	D					0.000	D			--		0.0018	D	0.000	D																			
																										--		0.0016	D																			
09/14/64	5050		1910	18.30																																												
1300	5000			8.0	0.0073	D		0.00	D			0.000	D	0.0	D					0.000	D			--		0.0017	D	0.00	D																			
																										--		0.0067	D																			
05/10/65	5050		9300 E	56.00																																												
1310	5000			7.8	0.017	D		0.00	D			0.000	D	0.0	D					0.000	D			--		0.0017	D	0.00	D																			
																										--		0.0033	D																			
09/20/65	5050		1530 E	62.00																																												
1310	5000			8.1	0.0063	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0034	D	0.0006	D																			
																										--		0.0063	D																			
05/10/66	5050		9750	13.90																																												
0945	5000			7.0	0.025	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0051	D	0.0008	D																			
																										--		0.0010	D																			
05/08/67	5050		19400	11.40																																												
1210	5000			7.6	0.054	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0051	D	0.0034	D																			
																										--		0.0034	D																			
09/11/67	5050		2000 E	19.40																																												
0945	5000			8.0	0.00	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0043	D	0.000	D																			
																										--		0.0046	D																			
05/06/68	5050		3270	12.80																																												
1045	5000			7.7	0.126	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0056	D	0.0019	D																			
																										--		0.0015	D																			
09/09/68	5050		1580	20.60																																												
1210	5000			8.2	0.0071	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0029	D	0.000	D																			
																										--		0.0037	D																			
09/08/69	5050		1370	21.70																																												
1245	5000			8.1	0.00	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0010	D	0.000	D																			
																										--		0.0049	D																			
05/11/70	5050		6610	9.00																																												
1230	5000			7.6	0.00	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0051	D	0.000	D																			
																										--		0.0014	D																			
09/14/70	5050		1830	16.00																																												
1150	5000			8.0	0.00	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0008	D	0.000	D																			
																										--		0.000	D																			
05/03/71	5050		19500	10.60																																												
1101	5000			7.4	0.049	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0021	D	0.0021	D																			
																										--		0.0021	D																			
09/13/71	5050		2180	19.00																																												
1125	5000			7.9	0.011	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.0025	D	0.000	D																			
																										--		0.010	D																			
05/01/72	5050		10100	11.50																																												
1101	5000		140	7.6	0.00	D		0.000	D			0.00	D	0.00	D					0.000	D			--		0.000	D	0.000	D																			
																										--		0.0054	D																			

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	CONSTITUENTS IN MILLIGRAMS PER LITER										LITHIUM MOLYBDENUM			NICKEL STRONTIUM			TITANIUM VANADIUM			REM
					ALUMINUM	ANTIMONY	BERYLLIUM	BISMUTH	CORAL	GALLIUM	GERMANIUM													
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	
F3			1300.00	KLAMATH R A SOMESRAR										F05A2										
05/21/52	5050		23200	13.0C		--		--		--		--		--		--		--		--		--		
0830	5050			7.7	0.00	D	--	--		--		--		--		--		--		--		--		
10/08/52	5050		3620	61.0F		--		--		--		--		--		--		--		--		--		
0900	5050			7.7	0.00	D	--	--		--		--		--		--		--		--		--		
05/06/53	5050		17200	56.0F		--		--		--		--		--		--		--		--		--		
0820	5050			7.2	0.00	D	--	--		--		--		--		--		--		--		--		
09/16/53	5050		4390	70.0F		--		--		--		--		--		--		--		--		--		
0900	5050			7.5	0.00	D	--	--		--		--		--		--		--		--		--		
05/05/54	5050		14800	62.0F		--		--		--		--		--		--		--		--		--		
1430	5000			7.7	0.04	D	--	--		--		--		--		--		--		--		--		
09/15/54	5050		4350	64.0F		--		--		--		--		--		--		--		--		--		
0830	5050			7.4	0.01	D	--	--		--		--		--		--		--		--		--		
05/09/55	5050		9860	62.0F		--		--		--		--		--		--		--		--		--		
2000	5000			6.8	0.04	D	--	--		--		--		--		--		--		--		--		
06/08/55	5050		7050	65.0F		--		--		--		--		--		--		--		--		--		
0830	5000			7.5	0.04	D	--	--		--		--		--		--		--		--		--		
09/14/55	5050		1670	62.0F		--		--		--		--		--		--		--		--		--		
0905	5000				0.02	D	--	--		--		--		--		--		--		--		--		
05/09/56	5050		19800	56.0F		--		--		--		--		--		--		--		--		--		
1300	5050				0.03	D	--	--		--		--		--		--		--		--		--		
09/12/56	5050		2530	69.0F		--		--		--		--		--		--		--		--		--		
1630	5000			7.1	0.08	D	--	--		--		--		--		--		--		--		--		
05/10/57	5050		10800	56.0F		--		--		--		--		--		--		--		--		--		
1500	5000			6.9	0.09	D	--	--		--		--		--		--		--		--		--		
09/12/57	5050		2830	72.0F		--		--		--		--		--		--		--		--		--		
1230	5000			7.9	0.06	D	--	--		--		--		--		--		--		--		--		
05/07/58	5050		19100	59.0F		--		--		--		--		--		--		--		--		--		
1245	5000			8.0	0.08	D	--	--		--		--		--		--		--		--		--		
09/10/58	5050		4400	70.0F		--		--		--		--		--		--		--		--		--		
1215	5000			8.6	0.01	D	--	--		--		--		--		--		--		--		--		
05/06/59	5050			11.7C		--		--		--		--		--		--		--		--		--		
1030	5000			7.4	0.13	D	--	--		--		--		--		--		--		--		--		

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME			SAMP LAR DEPTH		DISCH EC	TEMP PH	CONSTITUENTS IN MILLIGRAMS PER LITER										LITHIUM MOLYBDENUM		NICKEL STRONTIUM		TITANIUM VANADIUM		PEM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	ALUMINUM	ANTIMONY	BERYLLIUM	CADMIUM	COPPER	CHLORIDE	COBALT	CHROMIUM	GERMANIUM	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1330.00			KLAMATH R A SOMESPAR										F05A2 CONTINUED										
09/10/50	5050					22.80																	
0850	5000					7.7	0.10	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/60	5050					13.30																	
1730	5000						0.04	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/15/50	5050			1630		20.60																	
1405	5000					8.1	0.11	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/08/61	5050			8700		12.20																	
1645	5000					7.9	0.00	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/06/61	5050			1360		21.10																	
1330	5000					8.1	0.00	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/08/62	5050			10200		12.80				0.00	0	0.0	0	0.0	0	--		0.0034	0	0.00	0	0.0014	0
1135	5000					7.5	0.0050	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	--				
09/04/62	5050			1850		22.80				0.000	0	0.0	0	0.0	0	--		0.0026	0	0.00	0	0.0027	0
1440	5000					8.2	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	--				
05/06/63	5050			26500		10.00				0.00	0	0.00	0	0.00	0	--		0.0043	0	0.00	0	0.00	0
1145	5000					7.5	0.027	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	--				
09/03/63	5050			2240		21.70				0.000	0	0.0	0	0.0	0	--		0.0022	0	0.00	0	0.016	0
1250	5000					8.0	0.0087	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	--				
05/11/64	5050			8780		13.30				0.000	0	0.00	0	0.00	0	--		0.0020	0	0.000	0	0.0016	0
1245	5000					8.1	0.00	0	0.000	0	0.00	0	0.00	0	0.000	0	0.000	0	--				
F3 1430.00			KLAMATH R NR SEIAD VLY										F05C2										
05/13/50	5050					16.10																	
0900	5000						0.11	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/08/59	5050					20.00																	
1110	5000					8.0	0.00	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/04/60	5050					11.70																	
1000	5000					7.7	0.15	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/06/60	5050					21.10																	
1220	5000					8.1	0.13	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
05/09/61	5050			3420		14.40																	
1310	5000					8.3	0.00	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/12/61	5050			1860		18.30																	
0935	5000					7.9	0.00	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAR	DEPTH	DISCH EC	TEMP PH	ALUMINUM	CONSTITUENTS IN MILLIGRAMS PER LITER ANTIMONY BERYLLIUM	ARSENIC COPPER	CADMIUM GERMANIUM	LITHIUM MOLYBDENUM	NICKEL STRONTIUM	TITANIUM VANADIUM	PER
F3	1330.00					KLAMATH R A SOMESRAR						F05A2 CONTINUED
09/10/59 0850	5050 5000			22.8C 7.7	0.10 D	--	--	--	--	--	--	
09/02/60 1730	5050 5000			13.3C	0.04 D	--	--	--	--	--	--	
09/15/60 1405	5050 5000	1630		20.6C 8.1	0.11 D	--	--	--	--	--	--	
05/08/61 1645	5050 5000	8700		12.2C 7.9	0.00 D	--	--	--	--	--	--	
09/06/61 1330	5050 5000	1360		21.1C 8.1	0.00 D	--	--	--	--	--	--	
05/09/62 1135	5050 5000	10200		12.8C 7.5	0.0050 D	--	0.00 D	0.00 D	--	0.0034 D	0.00 D	0.0014 D
09/04/62 1440	5050 5000	1850		22.8C 8.2	0.00 D	--	0.000 D	0.00 D	--	0.0026 D	0.00 D	0.0027 D
05/06/63 1145	5050 5000	26500		10.0C 7.5	0.027 D	--	0.00 D	0.00 D	--	0.0043 D	0.00 D	0.00 D
09/03/63 1750	5050 5000	2240		21.7C 8.0	0.0087 D	--	0.000 D	0.00 D	--	0.0022 D	0.00 D	0.016 D
05/11/64 1245	5050 5000	8780		13.3C 8.1	0.00 D	--	0.000 D	0.00 D	--	0.0020 D	0.000 D	0.0016 D
F3	1430.00					KLAMATH R NR SEIAD VLY						F05C2
05/13/59 0900	5050 5000			16.1C	0.11 D	--	--	--	--	--	--	
09/08/59 1110	5050 5000			20.0C 8.0	0.00 D	--	--	--	--	--	--	
05/04/60 1000	5050 5000			11.7C 7.7	0.15 D	--	--	--	--	--	--	
09/06/60 1220	5050 5000			21.1C 8.1	0.13 D	--	--	--	--	--	--	
05/09/61 1310	5050 5000	3420		14.4C 8.3	0.00 D	--	--	--	--	--	--	
09/12/61 0945	5050 5000	1860		18.3C 7.9	0.00 D	--	--	--	--	--	--	

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME			SAMP LAB DEPTH		DISCH EC	TEMP PH	ALUMINIUM				CONSTITUENTS ANTIMONY RERYLLIUM				IN MILLIGRAMS RISMUTH CORALT				PER LITER GALLIUM GERMANIUM				LITHIUM MOLYBDENUM				NICKEL STRONTIUM				TITANIUM VANADIUM				REM							
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *						
F3			1430.00				KLAMATH R NR SEIAD VLY										F05C2 CONTINUED																									
05/16/62	5050		3390	13.9C							--		0.00	D	0.0	D	--		0.0049	D	0.00	D					0.0049	D	0.00	D												
1335	5000			8.3			0.0094	D		0.00	D		0.070	D	0.00	D	0.00	D	--				0.00	D			--					0.0010	D									
09/13/62	5050		1430	19.4C							--		0.000	D	0.0	D	--		0.0017	D	0.00	D					0.0017	D	0.00	D												
1135	5000			8.3			0.00	D		0.00	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0040	D									
05/02/63	5050		6300	9.4C							--		0.00	D	0.00	D	--		0.00	D	0.00	D					0.00	D	0.00	D												
1130	5000			7.7			0.187	D		0.00	D		0.00	D	0.00	D	0.00	D	--				0.00	D			--					0.011	D									
09/11/63	5050		1590	20.0C							--		0.000	D	0.0	D	--		0.0011	D	0.00	D					0.0011	D	0.00	D												
1045	5000			8.0			0.013	D		0.00	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.023	D									
05/06/64	5050		2430	10.0C							--		0.000	D	0.00	D	--		0.0019	D	0.000	D					0.0019	D	0.000	D												
1105	5000			8.4			0.0091	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0034	D									
09/02/64	5050		1500	17.8C							--		0.000	D	0.0	D	--		0.0011	D	0.00	D					0.0011	D	0.00	D												
1130	5000			8.4			0.0050	D		0.00	D		0.00	D	0.0000	D	0.0018	D	--				0.0018	D			--					0.0087	D									
05/04/65	5050		4810 E	54.0F							--		0.000	D	0.0	D	--		0.0030	D	0.00	D					0.0030	D	0.00	D												
1210	5000			8.0			0.021	D		0.00	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0048	D									
09/15/65	5050		2500	64.0F							--		0.000	D	0.00	D	--		0.0016	D	0.000	D					0.0016	D	0.000	D												
1240	5000			8.2			0.0089	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0091	D									
05/02/66	5050		3540	15.0C							--		0.000	D	0.00	D	--		0.0031	D	0.000	D					0.0031	D	0.000	D												
1515	5000			8.2			0.027	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0069	D									
09/12/66	5050		1480	16.7C							--		0.000	D	0.00	D	--		0.026	D	0.000	D					0.026	D	0.000	D												
1140	5000			8.2			0.024	D		0.0000	D		0.00	D	0.0000	D	0.0018	D	--				0.0018	D			--					0.0060	D									
05/02/67	5050		5020	12.0C							--		0.000	D	0.00	D	--		0.0029	D	0.0011	D					0.0029	D	0.0011	D												
1225	5000			8.2			0.037	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0063	D									
09/06/67	5050		1550	20.8C							--		0.000	D	0.00	D	--		0.0037	D	0.000	D					0.0037	D	0.000	D												
1025	5000			8.2			0.010	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0054	D									
05/06/68	5050		2410	13.3C							--		0.000	D	0.00	D	--		0.0049	D	0.000	D					0.0049	D	0.000	D												
1430	5000			8.4			0.063	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0034	D									
09/04/68	5050		1190	21.7C							--		0.000	D	0.00	D	--		0.0019	D	0.000	D					0.0019	D	0.000	D												
1530	5000			8.4			0.011	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0051	D									
05/12/69	5050		9400	14.4C							--		0.000	D	0.00	D	--		0.0046	D	0.0031	D					0.0046	D	0.0031	D												
1345	5000			8.0			0.071	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0022	D									
09/16/69	5050		1530	16.7C							--		0.000	D	0.00	D	--		0.0021	D	0.000	D					0.0021	D	0.000	D												
0805	5000			7.8			0.023	D		0.0000	D		0.00	D	0.0000	D	0.0000	D	--				0.0000	D			--					0.0040	D									

SUPPLEMENTAL MINOR ELEMENT ANALYSES OF SURFACE WATER

DATE TIME	SAMP LAB	DEPTH	DISCH EC	TEMP PH	ALUMINUM	ANTIMONY BERYLLIUM	BISMUTH COBALT	GALLIUM GERMANIUM	LITHIUM MOLYBDENUM	NICKEL STRONTIUM	TITANIUM VANADIUM	RFM
* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *	* * *
F3 1430.00 KLAMATH R NR SEIAD VLY F05C2 CONTINUED												
05/12/70	5050		3130	9.40		--	0.000 D	0.00 D	--	0.000 D	0.000 D	
1630	5000			8.3	0.00 D	0.000 D	0.00 D	0.000 D	0.000 D	--	0.0029 D	
03/03/70	5050		1240	22.00		--	0.000 D	0.00 D	--	0.0021 D	0.000 D	
1325	5000			8.4	0.014 D	0.000 D	0.00 D	0.000 D	0.000 D	--	0.0011 D	
05/10/71	5050		12700	13.00		--	0.000 D	0.00 D	--	0.0026 D	0.000 D	
1451	5000			7.8	0.037 D	0.000 D	0.00 D	0.000 D	0.000 D	--	0.0088 D	
09/21/71	5050		2090	18.00		--	0.000 D	0.00 D	--	0.0005 D	0.000 D	
1450	5000			8.2	0.034 D	0.000 D	0.00 D	0.000 D	0.000 D	--	0.017 D	
05/17/72	5050		5500	13.00		--	0.000 D	0.00 D	--	0.021 D	0.000 D	
0930	5000		171	7.9	0.022 D	0.000 D	0.00 D	0.000 D	0.000 D	--	0.0071 D	
F3 1460.00 KLAMATH R A SARAH TOTTEN CAMPGROUN F05C3												
08/26/81	5050			21.00		--	--	--	--	--	--	
1110	5050		295	8.2	0. D	--	--	--	--	--	--	
F3 4100.00 SALMON R A SOMESRAR F05B1												
05/06/59	5050			10.60		--	--	--	--	--	--	
0945	5000			7.4	0.12 D	--	--	--	--	--	--	
06/03/59	5050			13.30		--	--	--	--	--	--	
0750	5000			7.5	0.01 D	--	--	--	--	--	--	
02/10/59	5050			21.10		--	--	--	--	--	--	
0945	5000			7.5	0.0 D	--	--	--	--	--	--	
05/02/60	5050			11.70		--	--	--	--	--	--	
1650	5000			7.7	0.05 D	--	--	--	--	--	--	
09/15/60	5050		157	20.00		--	--	--	--	--	--	
1505	5000			8.1	0.00 D	--	--	--	--	--	--	
05/08/61	5050		2170	11.10		--	--	--	--	--	--	
1615	5000			7.3	0.00 D	--	--	--	--	--	--	
02/06/61	5050		166	21.10		--	--	--	--	--	--	
1430	5000			8.1	0.00 D	--	--	--	--	--	--	

CONVERSION FACTORS

Quantity	To Convert from Metric Unit	To Customary Unit	Multiply Metric Unit By	To Convert to Metric Unit Multiply Customary Unit By
Length	millimetres (mm)	inches (in)	0.03937	25.4
	centimetres (cm) for snow depth	inches (in)	0.3937	2.54
	metres (m)	feet (ft)	3.2808	0.3048
	kilometres (km)	miles (mi)	0.62139	1.6093
Area	square millimetres (mm ²)	square inches (in ²)	0.00155	645.16
	square metres (m ²)	square feet (ft ²)	10.764	0.092903
	hectares (ha)	acres (ac)	2.4710	0.40469
	square kilometres (km ²)	square miles (mi ²)	0.3861	2.590
Volume	litres (L)	gallons (gal)	0.26417	3.7854
	megalitres	million gallons (10 ⁶ gal)	0.26417	3.7854
	cubic metres (m ³)	cubic feet (ft ³)	35.315	0.028317
	cubic metres (m ³)	cubic yards (yd ³)	1.308	0.76455
	cubic dekametres (dam ³)	acre-feet (ac-ft)	0.8107	1.2335
Flow	cubic metres per second (m ³ /s)	cubic feet per second (ft ³ /s)	35.315	0.028317
	litres per minute (L/min)	gallons per minute (gal/min)	0.26417	3.7854
	litres per day (L/day)	gallons per day (gal/day)	0.26417	3.7854
	megalitres per day (ML/day)	million gallons per day (mgd)	0.26417	3.7854
	cubic dekametres per day (dam ³ /day)	acre-feet per day (ac-ft/day)	0.8107	1.2335
Mass	kilograms (kg)	pounds (lb)	2.2046	0.45359
	megagrams (Mg)	tons (short, 2,000 lb)	1.1023	0.90718
Velocity	metres per second (m/s)	feet per second (ft/s)	3.2808	0.3048
Power	kilowatts (kW)	horsepower (hp)	1.3405	0.746
Pressure	kilopascals (kPa)	pounds per square inch (psi)	0.14505	6.8948
	kilopascals (kPa)	feet head of water	0.33456	2.989
Specific Capacity	litres per minute per metre drawdown	gallons per minute per foot drawdown	0.08052	12.419
Concentration	milligrams per litre (mg/L)	parts per million (ppm)	1.0	1.0
Electrical Conductivity	microsiemens per centimetre (µS/cm)	micromhos per centimetre	1.0	1.0
Temperature	degrees Celsius (°C)	degrees Fahrenheit (°F)	$(1.8 \times ^\circ\text{C}) + 32$ $(^\circ\text{F} - 32)/1.8$	